

THE  
ARCHITECT  
& BUILDING NEWS

IN THIS ISSUE

- NEW BUILDING FOR CIVIC DESIGN,  
LIVERPOOL UNIVERSITY
- SHEFFIELD AND ROTHERHAM

APRIL 3, 1952

VOL. 201

NO. 4346

ONE SHILLING WEEKLY

## Greatways to Progress



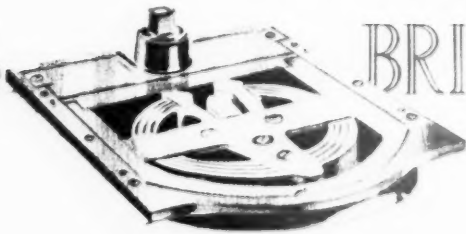
### Australia House—

Foundation Stone laid by H.M. King George V, 24th July, 1913

Officially opened by H.M. King George V, 3rd August, 1918

Architects: J. Marshall Mackenzie & Co. Inc. C.P.R.I.B.C.E.

# The

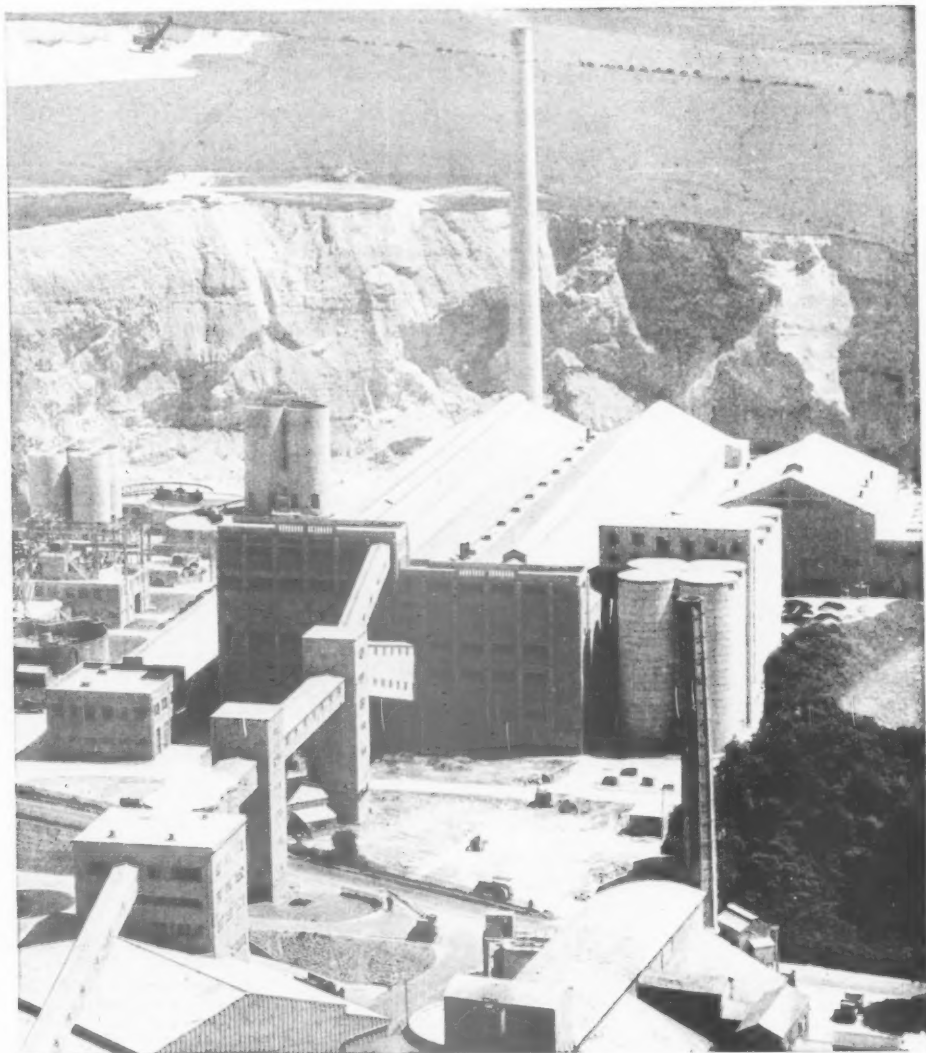


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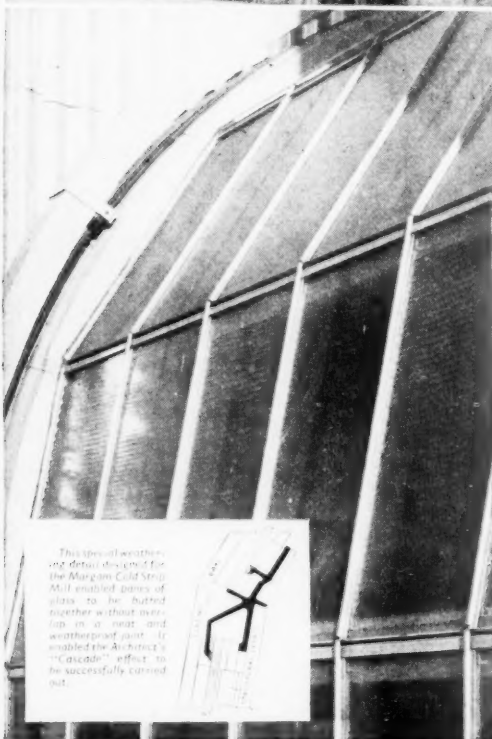
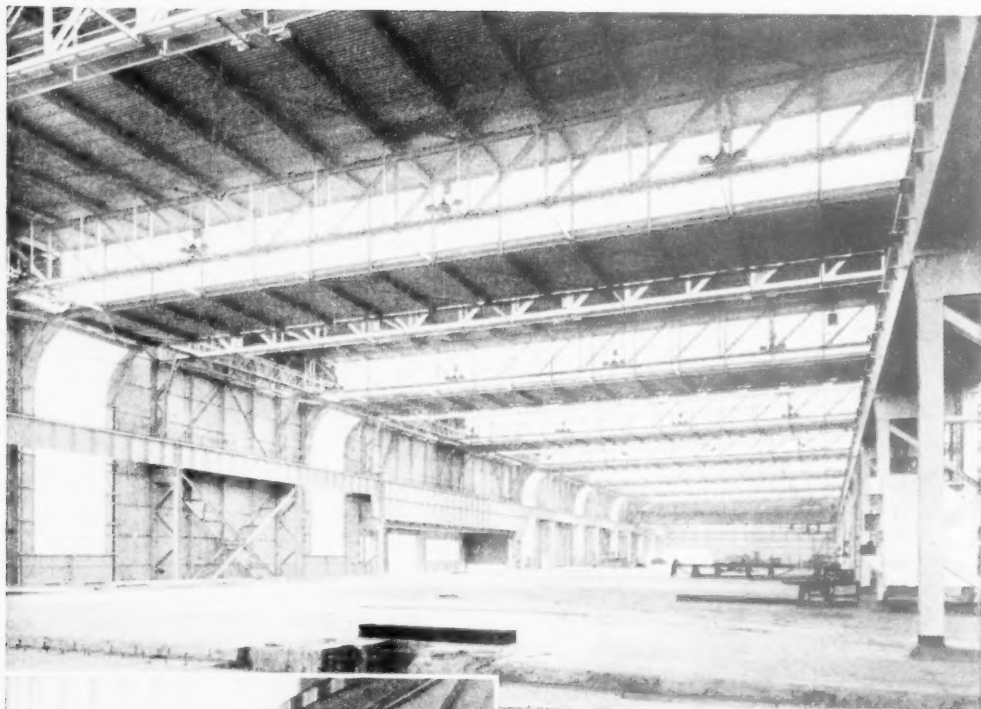
Post-war Britain is being built on a concrete foundation. The demand for cement keeps growing and the Blue Circle Organisation is growing, too. The new factory at Shoreham—built at a cost of over two and a half million pounds—will increase the total output by 350,000 tons a year. Under free enterprise the Blue Circle Organisation is giving its full support to Britain's rebuilding programme.



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The special weathering detail designed for the Margam Cold Strip Mill enabled panes of glass to be butted together without overlap in a neat and weatherproof joint. It enabled the Architects' "cascade" effect to be successfully carried out.

#### WILLIAMS AND WILLIAMS at MARGAM

### Further examples of the versatility of Aluminex Patent Glazing

The Abbey Works of the Steel Company of Wales, is the largest rolling mill in Europe and is one of the most outstanding engineering plants designed since the war. Working in conjunction with the Consulting Engineers, Messrs. W. S. Atkins & Partners, and the Architects, Sir Percy Thomas & Sons, Williams and Williams were able to produce glazing of a unique and impressive character, examples of which are shown in these pages. The cascade sidewall lights are of particular interest, being expressly designed to meet the exacting lighting requirements.

**CASCADE GLAZING** When it had been decided that Aluminex Patent Glazing provided all the features required for the sidewall glazing of the Steel Mills at Margam, certain technical difficulties were discovered. In order to produce even daylighting throughout the building it was necessary that the panels of sidewall glazing should curve inwards at the head. It was inadmissible to break the line of the curve by allowing the panes to overlap in a "lobster-back" fashion and curved glass was out of the question because of cost and difficulty of replacement. The effect had to be achieved by using flat panes of glass set out in a series of chords, and this arrangement presented special weathering problems, as also did the very flat pitch near the top of the cascade.



To overcome these the Aluminex engineers designed a new weathering detail which is shown in the drawing and in the photograph at the bottom of the opposite page, and is a development of the standard Aluminex "Z" weathering extrusion which is one of the special features of the Aluminex Glazing system. The remarkable effect achieved resembled cascades of glass and is vividly illustrated in the photographs. The cascades are each fourteen feet wide and range from fifteen feet to fifty-five feet high. The fifty-five foot cascades are composed of seven vertical tiers with a further curved portion of three tiers on a 9' 9" radius. The cascades were glazed in some instances with specially toughened glass in order to resist the thermal shock caused by hot ingots passing within a few feet of them.

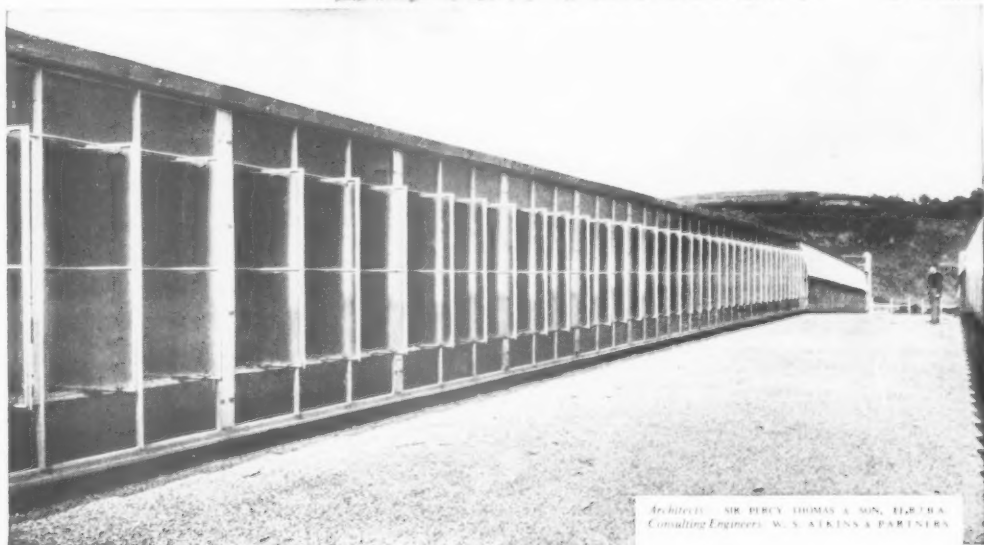
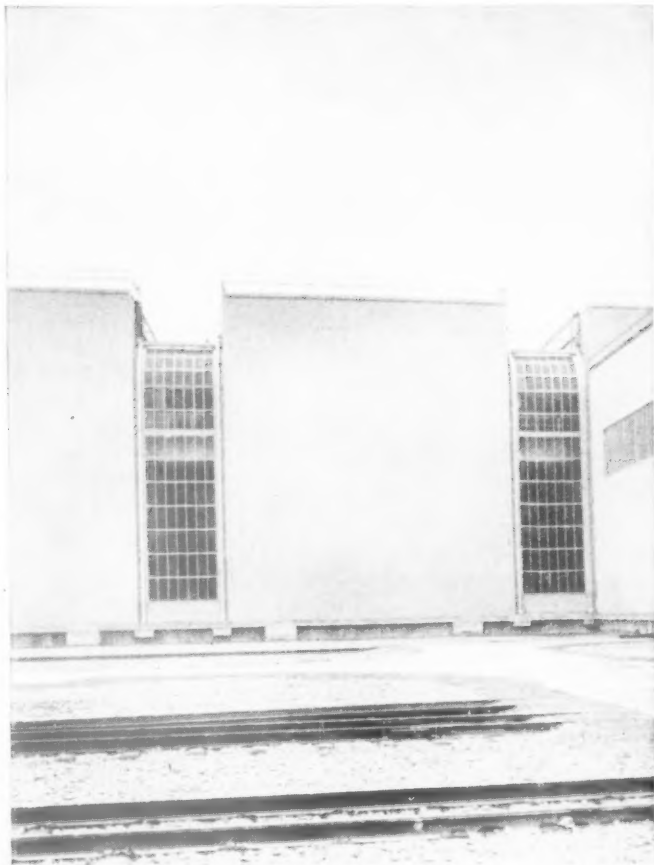
#### HIGH LOW ROOF CONSTRUCTION

To provide controlled ventilation together with even distribution of light, the monitors in the Cold Mill Building are glazed partly with continuous top-hung Aluminex opening lights and partly with aluminium vertical pivot-hung windows made by the Reliance Division of Williams and Williams. Both are operated by Teleflex Gear with hand-operators placed so that they can be manipulated from walkways on the crane gantry. The vertical pivot-hung windows are arranged to open 135 degrees and are coupled together in ranges so that one gear operation opens the complete range. Thus ventilation can be controlled quickly to very fine degrees in accordance with either temperature or changes in wind direction.


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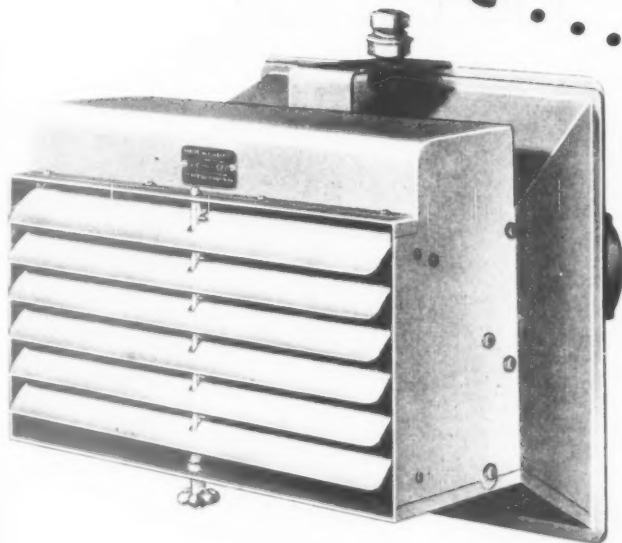
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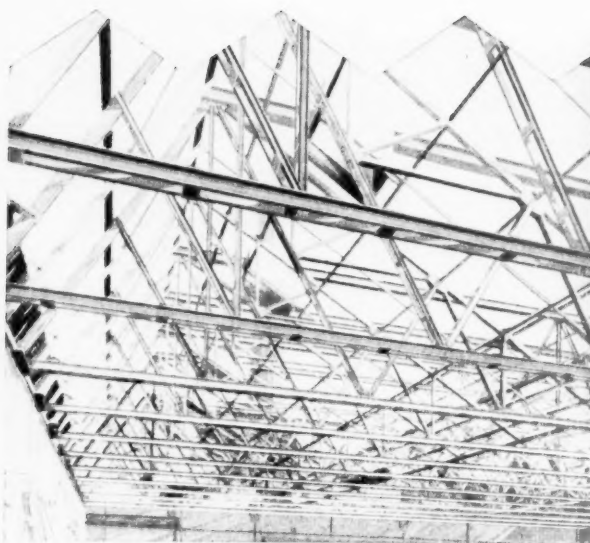
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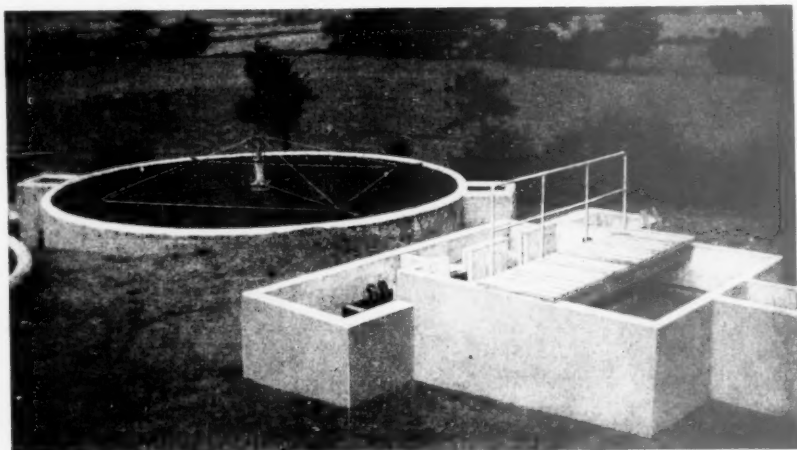
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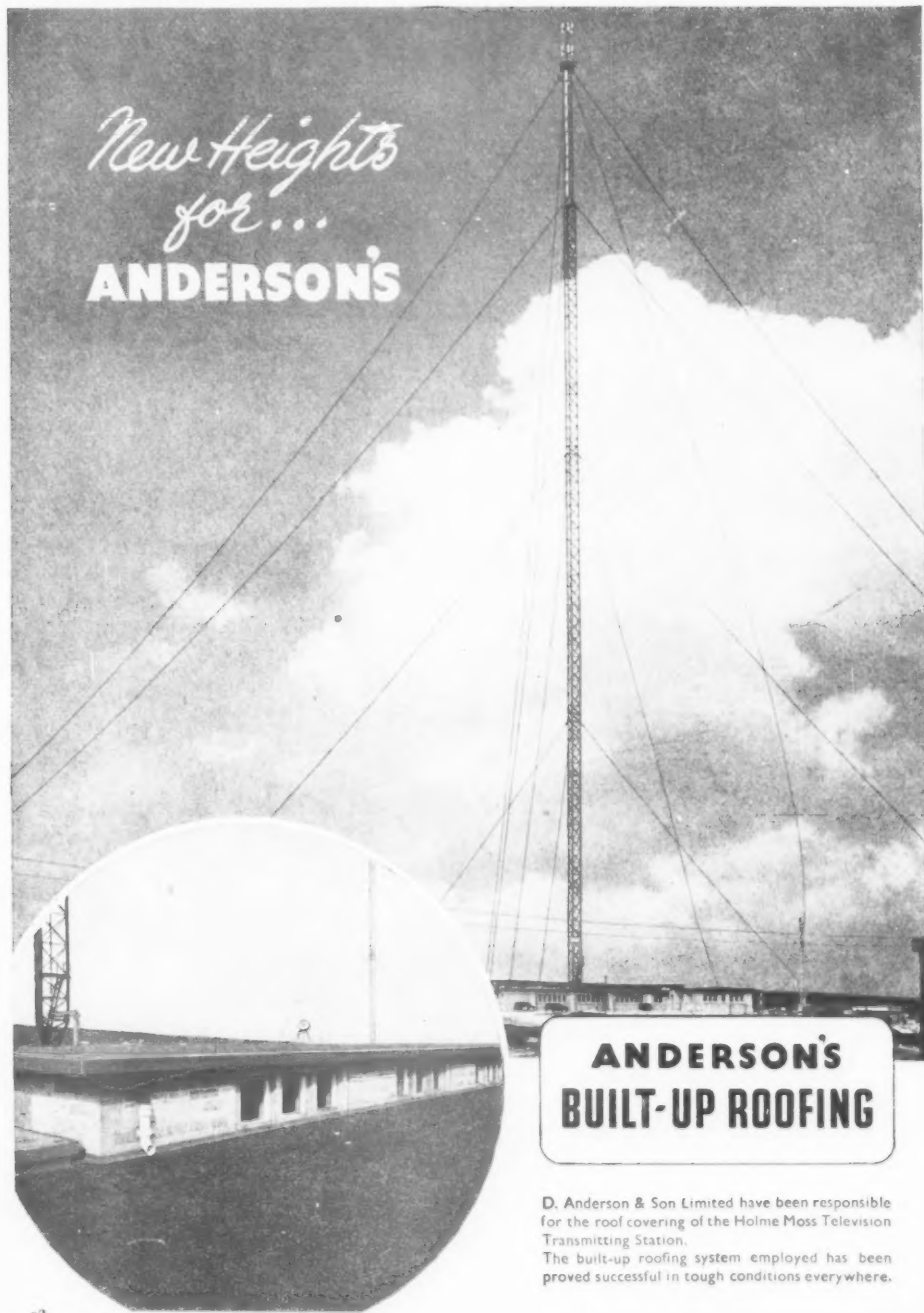
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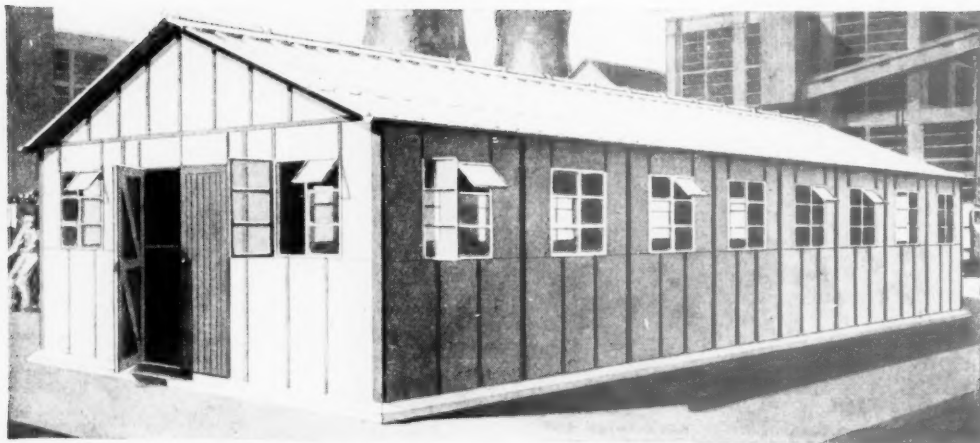


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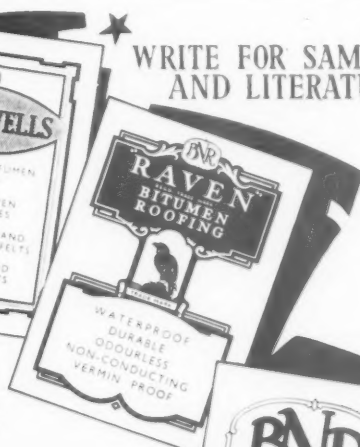
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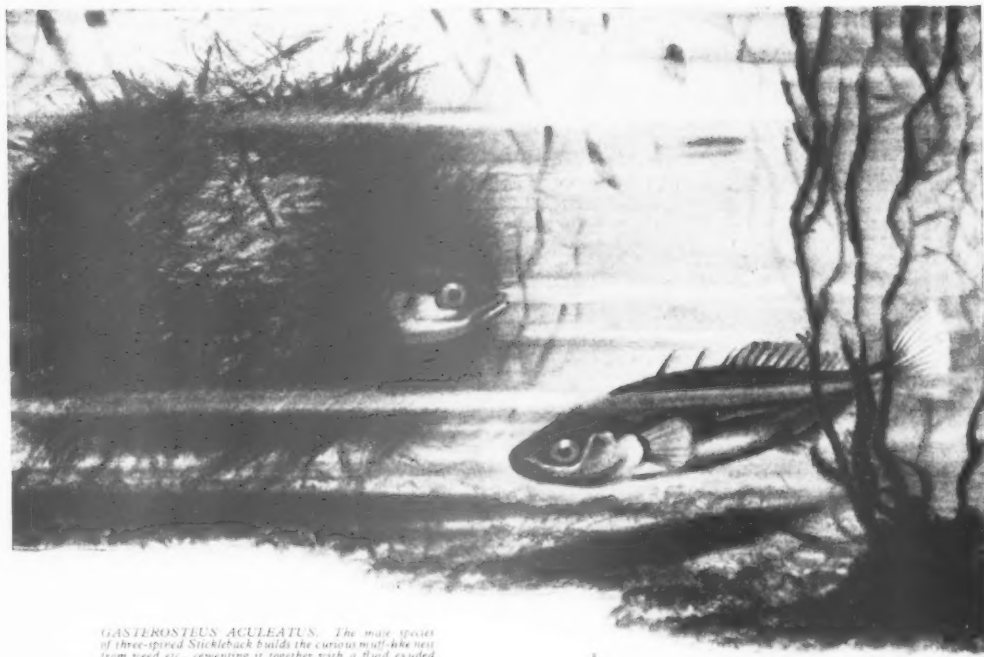


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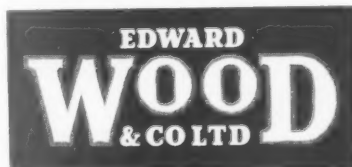
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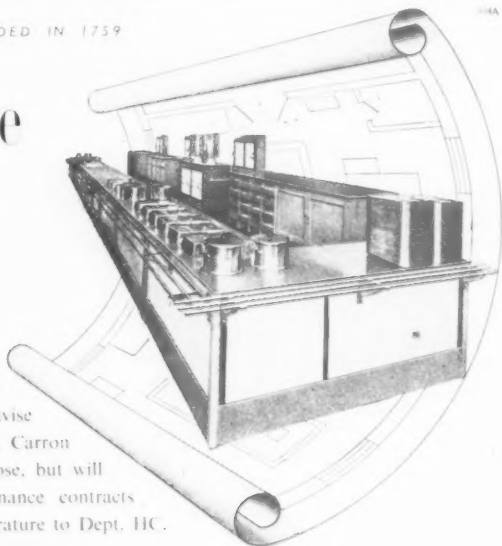
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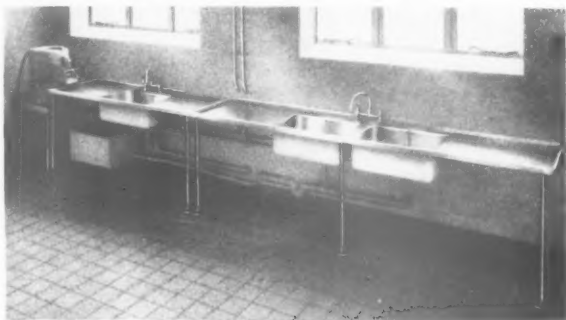
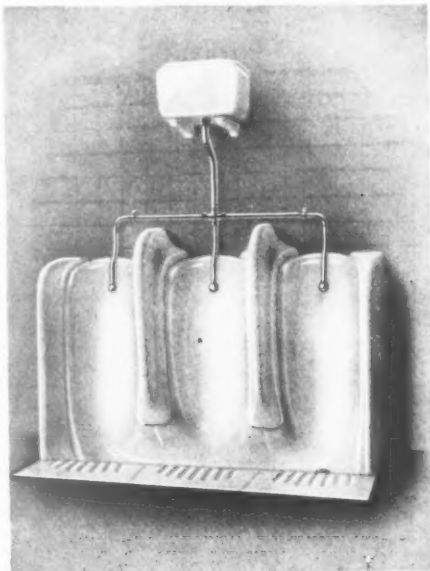




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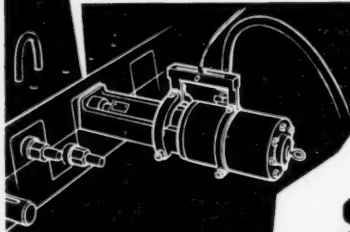
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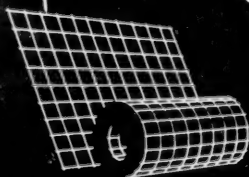
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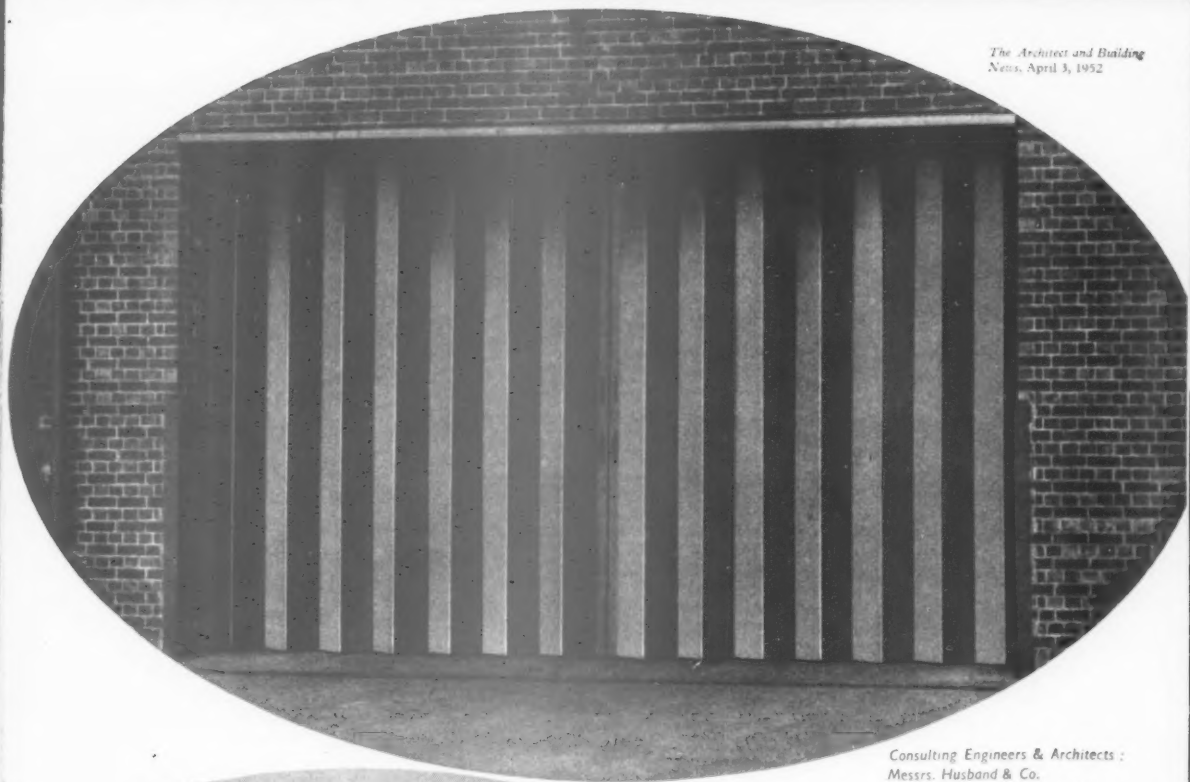
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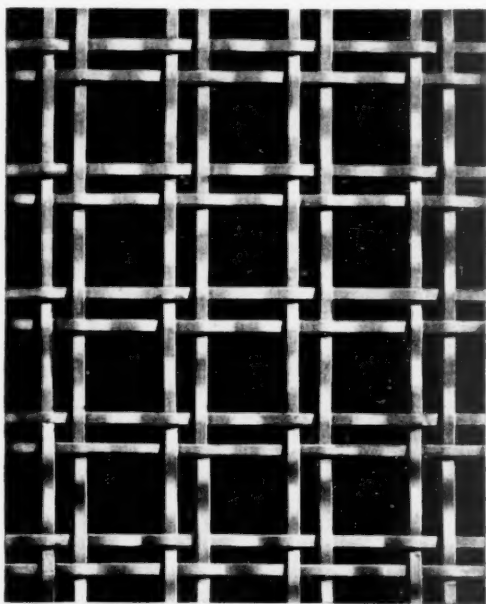
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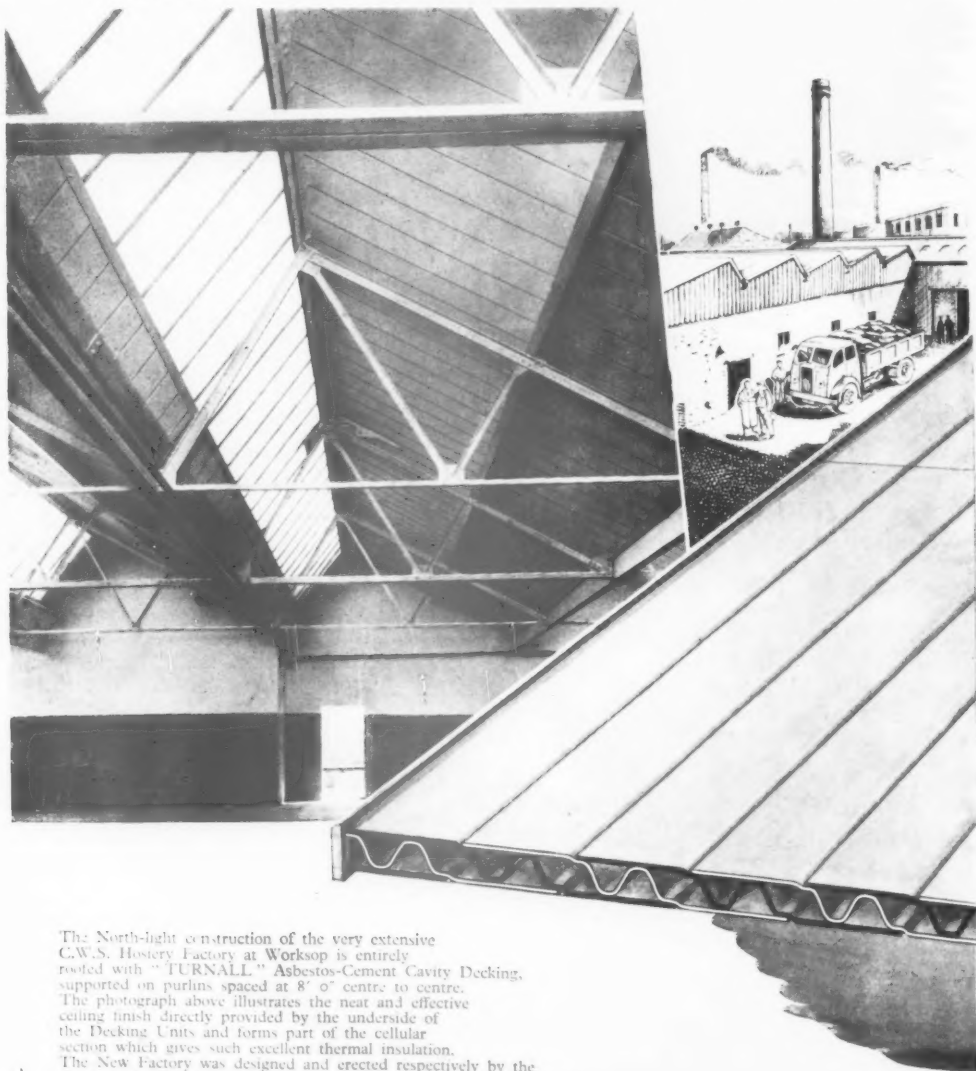
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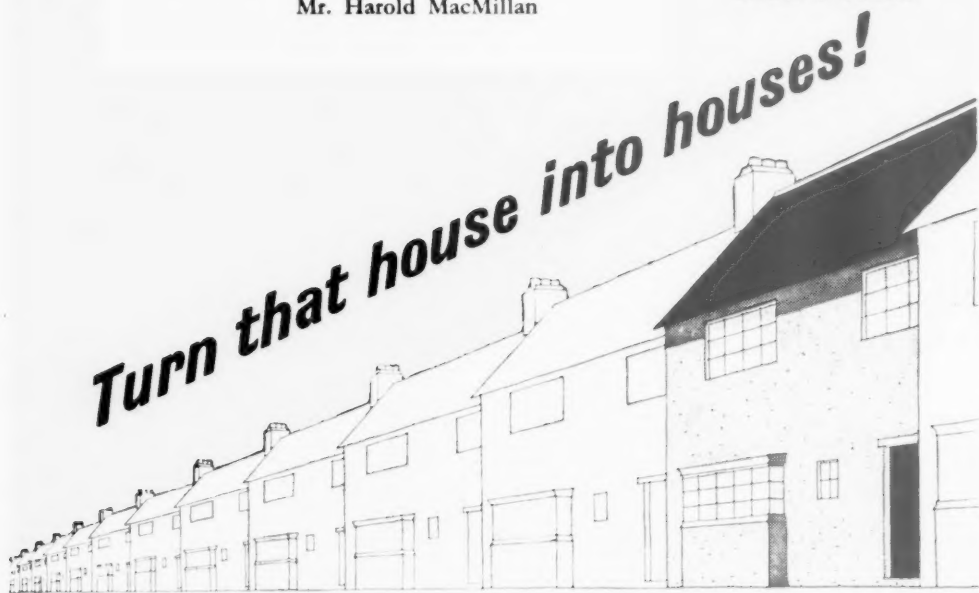
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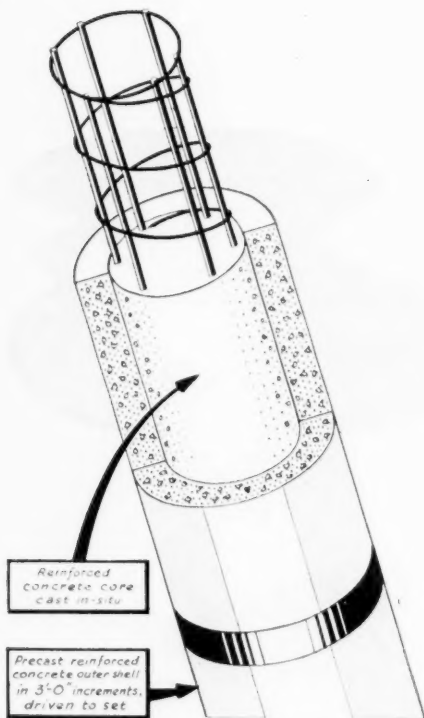
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# THE ARCHITECT & BUILDING NEWS

April 3, 1952

The "Architect and Building News" incorporates the "Architect" founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid: U.S.A. and Canada \$7.00

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## BLIGHT AFTER BLITZ

**S**HORTAGES of materials, the extension of exports, the stabilization of the pound and the demands of rearmament have far-reaching effects. We have been reminded of some of them by the speeches at the recent Annual Dinner of the Coventry Society of Architects and, in particular, that of the Vice-chairman, Mr. Oldham. He said that in the last ten years "blitzed cities in general and Coventry in particular, have had a raw deal in the matter of replacement of lost buildings."

It was also emphasized that the loss of central cores to large towns and their continued non-development created a vacuum, for, owing to lack of offices added to shortages of residential accommodation, managerial and professional people were migrating in increasing numbers, in the case of Coventry, to the neighbouring towns of Leamington, Kenilworth and Warwick and even farther afield. Apart from the loss of trade, of rates and the continuance of a depressed appearance, these damaged towns and cities are finding that their cultural activities are suffering reduction and even extinction by dispersal. The net result is that communal spirit tends to die, and pride in urban qualities is decreased to a point of apathy. Coventry may be a particular case but it is by no means exceptional.

Even in so isolated and compact a city as Norwich the same tendencies are apparent and central reconstruction seems to be left to take a haphazard course of piecemeal development only bound together loosely by such powers as are provided, at present, by the relevant control clauses of the 1947 Act and its Interim Development Orders.

In Exeter some attempt to co-ordinate the redevelopments of blitzed areas by the design of blocks through compulsory purchase procedure has led to some rebuilding in the High Street, but it is a very small part of this city's loss that has so far been made good.

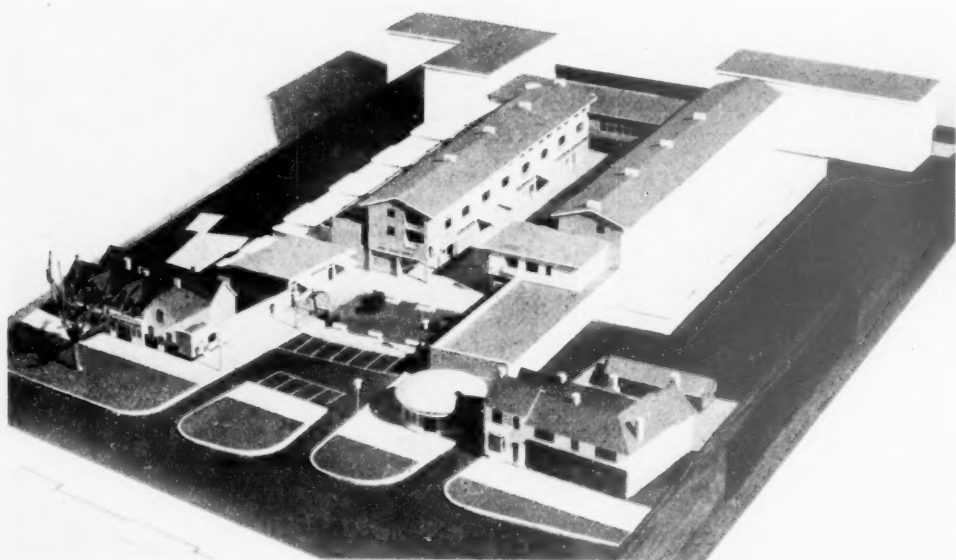
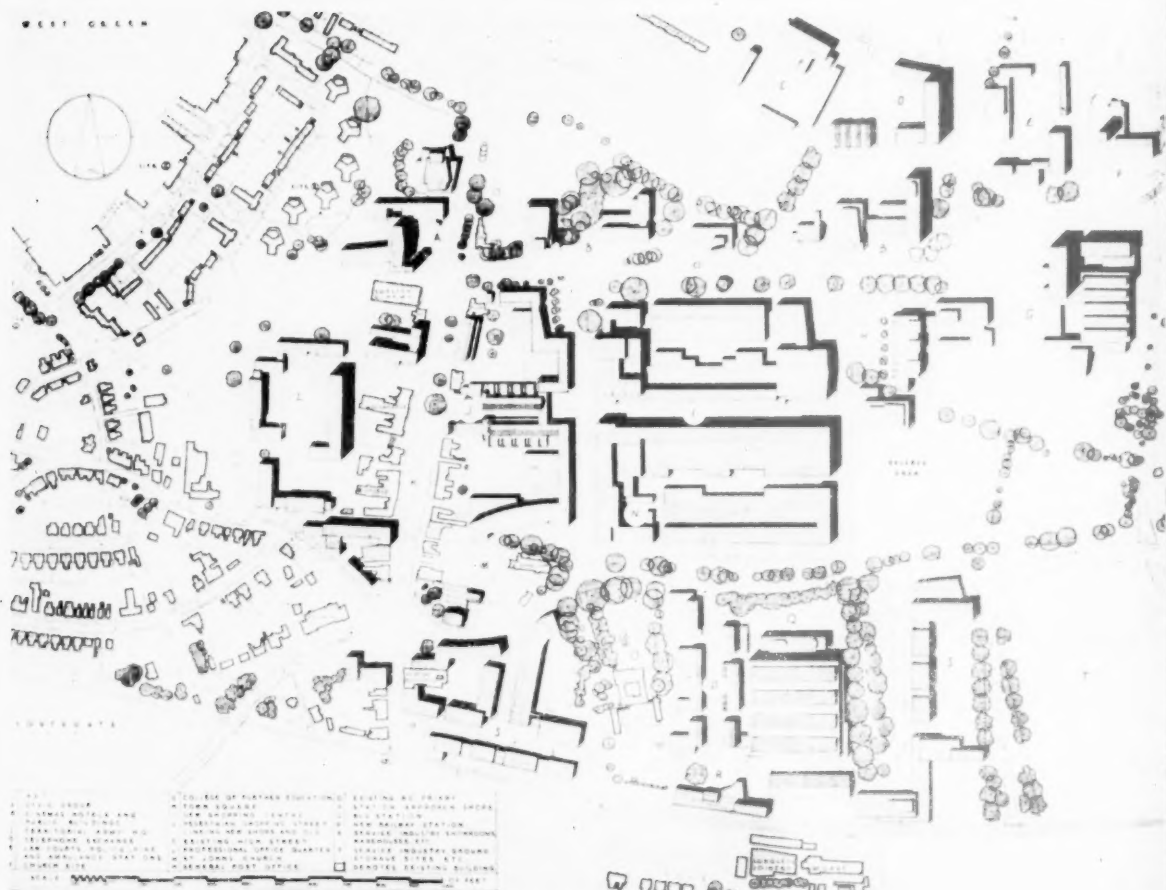
Plymouth, having boldly started its reconstruction by the planning and carrying out of new wide streets and central layout, finds but few of the sites so freed

to be in the hands of builders and only a few buildings to have, so far, materialized.

In the heavily blitzed centres of Portsmouth and Southampton there is no doubt that many of the conditions and results of lack of reconstruction are similar to those of Coventry, because, here too, there are near-by towns that can and do receive the community overspill. Some progress has been made in both places with new buildings carried out by recourse to block-controlled developments and to attempted control of individual sites as at Norwich, but the amount so far accomplished is lamentably short of the total requirements. Hull, like Coventry and Norwich, has managed to carry out rehabilitation of many of its damaged industrial buildings, but its central developments lag equally behind. Whether the City of London will ever recover from delays in reconstruction is a question that many living now can never hope to see answered.

With the new shortages of steel, resulting from rearmament demands and the reorientation of labour into the same channels as those of increased exports, it would seem that the prospects of faster rehabilitation are not improved. The losses incurred by these Local Authorities and the loss nationally can only be guessed at, but they must be heavy. It is, therefore, not to be wondered at from time to time there are strong pleas and protests from architects and others who are in positions to see the whole of the picture from viewpoints nearer to the blitzed urban centres than that of Whitehall.

These reconstructions may be classified as capital expenditure (to be curbed at all costs) by the economic controllers of our national finance, but do they also know that such expenditure can also be viewed as the creation of assets that may well affect economy and Budgets for the next hundred years? And that the working life of the average business and professional man is but some two score years? And that the creation of apathy and frustration is more than a mere psychological phenomenon and that continued in extension it becomes a national loss?



# CRAWLEY NEW TOWN PROPOSALS

Chief Architect: A. C. Sheppard Fidler

ON Saturday March 29, Sir Thomas Bennett, Chairman of the Crawley Development Corporation made his Annual Report to Representatives at a gathering in Crawley. On this and the facing page are shown proposals for a pedestrian shopping street in the new Town Centre and a neighbourhood centre at West Green, proposals for which have now been settled.

## 1. Plan showing Crawley Town Centre.

Senior Architect in Charge: H. S. Howgrave Graham. Design team: Anthony Petty and P. G. M. Hassack.

Present shopping facilities in Crawley are concentrated in the High Street, which is a section of the London-Brighton Road. The Master Plan provides expansion in an Easterly direction and the main approach will be ultimately from the proposed Brighton motorway on the East. The principal circulatory roads at the centre which are the High Street, the new East-West Boulevard, Tilgate Radial and the existing Three Bridges Road enclose the new shopping centre. Small car parks are provided all round the perimeter. The area North of the Boulevard is reserved for buildings of a public and semi-public character, including hotels, cinemas etc. The Boulevard is terminated at the Western end by the Civic Group and at the Eastern end by the College of Further Education on a 6½-acre site. The new Railway Station is to be built to the East of the existing one and connected to the Three Bridges Road, by a shopping street. A 3-acre site between the shopping centre and the railway station is allocated to a bus station. The remaining areas South of Three Bridges Road are devoted to various business uses including warehousing and service industry.

The new shops are linked to the existing High Street by a short pedestrian shopping street which will be the first portion of the new centre to be built.

## 2. Model of the pedestrian shopping street.

Design Team: H. S. Howgrave Graham, N. Foley, Anthony Petty and P. G. M. Hassack. Model: E. Ching.

This short pedestrian shopping street links the existing High Street to larger shops of the new Town Centre. The High Street entrance, sited between two existing public houses (both buildings of historic and architectural interest) is designed in the form of an open square containing a car park, flagged pavings and a small garden and flanked by single-storey shops. The walkway then narrows to 30 feet between three-storey blocks and the shopper passes under a bridge cafe-restaurant into a second small paved square at the Eastern end. The buildings have been designed to form a transition between the small-scale domestic buildings of the High Street and the more formal character proposed for the new shopping area.

## 3. Model of West Green Neighbourhood Centre.

Design Team: H. S. Howgrave Graham, K. H. Saunders, R. R. Bryant, C. J. Greening and K. J. Todd. School and Community Wing by F. R. Steele, County Architect, West Sussex County Council. Model by E. Ching.

The neighbourhood centre comprises 7 shops, with maisonettes over, a public house and terrace housing planned around a small green. A Community wing and Youth Centre are attached to the School Hall. Service Industry is planned behind shops.



# EVENTS AND COMMENTS

## THE THERMAL INSULATION OF BUILDINGS

With snow swirling in a high wind as I write, thermal insulation is of severely practical, if unseasonal, interest. How I wish that I had insulated the ceilings of my bedrooms, how I wish I had, after all, ordered the weather-stripping for the gaping gaps round the doors. Earlier in the week I attended a two-day course on the Thermal Insulation of Buildings at the Imperial College of Science and Technology. The majority of the lectures were very good and were given by some of the leading authorities on the subject from the B.R.S. and elsewhere. Sir Alfred Egerton gave the opening address and attended all the lectures. Although a great deal of what was said had been previously published in Government leaflets, I learned quite a lot and found the course well worth while. The thing that puzzled me, however, was the audience. It numbered about 70, of whom 45 were the representatives of manufacturers of insulating materials, four were from the B.R.S. or N.P.L., five from Ministries, five from technical colleges, three from education authorities, two from the gas industry, and four were students from the City and Guilds College.

The course was not well advertised and it was not clear for whom it was intended. As it turned out it was admirably suited to architects, but there were probably not as many as ten architects there and all of them were officials of some kind. I would like to see the whole course, suitably modified, put on after office hours expressly for architects.

Several interesting things emerged for the series of discussions which went with the lectures. Several speakers drew attention to the fact that many local authorities still object to the use of clinker blocks for the inner leaves of cavity walls in spite of the provisions of the B.S. on the subject. No one really answered the question why it is so hard to obtain clinker blocks to B.S.

Questions and answers about the use of lightweight concrete blocks showed that there is still a big gulf between the work of the B.R.S. and the practical builder. The importance of ensuring that lightweight blocks were absolutely dry before use, to avoid shrinkage movement, was stressed but no one had any clear idea of how this could be tested except in a laboratory. There also seemed to be no answer to the remark that surely it was pointless to take a lot of trouble keeping the blocks dry and then to apply wet plaster on top of them.

If one knows nothing else about heat insulation one does at least know about the magic U value of 0.20, but even this basic fact was called in question when speakers explained that because a certain material of a certain thickness under laboratory conditions had a U value of 0.20 it was not necessarily the same on the job or on any two days of the same week. The most important and disturbing thing brought out by the course was the fact that whereas everyone knows that it has been laid down in the Housing Manual that walls and roofs should have a U value of not more than 0.20, the model byelaws, now in draft form, only require heat insulation of something like 0.43 or a standard quite unacceptable to modern scientific thought. It surely is high time that adequate thermal insulation was insisted upon under the byelaws. A speaker pointed out

that in Denmark it is against the law for building societies to lend money for domestic buildings unless they are provided with adequate thermal insulation. Great work is being done in the development of more efficient solid fuel burning appliances, but unless it is combined with the compulsory use of insulation the work will be at least half wasted.

Byelaws apart, it seems to me that at present the only chance for the greater use of thermal insulation in domestic work is in the development of materials which are not solely for the purpose of insulation. Clinker blocks are a case in point. My reason for saying this is that at present the first thing to be cut when the tenders come in is thermal insulation. If no saving is made by the elimination of clinker block—and a speaker pointed out that this type of construction should be cheaper than an inner skin of brick—then, and then only, will thermal insulation stay in the bill. It is sickening to think that after all the reports and resolutions made on the subject since the war the vast majority of houses being constructed to-day embody none of the recommendations. It is not just sickening, it is criminal.

## OXFORD GAS WORKS

On the opposite page you will see a further statement about the Oxford Gas Works. It represents a most remarkable change of heart. So much so that I cannot but think that there is a catch in it somewhere. Broadly speaking the Southern Gas Board says that it will one day move the gas works from its present site. It expects to vacate the site north of the Thames within ten years. Public opinion, you will notice, is still a powerful thing even against nationalized industries. While welcoming the Gas Board's statement I hope it will understand when I say that I do so with my fingers crossed.

## ARCHITECTURAL PRACTICE IN AMERICA

The A.I.A. having questioned, according to Architectural Forum, 9,000 of its members has published a forecast of the prospects for architectural practice in the United States for 1952. It finds that there will be a slight overall increase in the total dollars spent on building, with three times as much Defence work as last year. Other public work will be about the same with a hundred per cent increase in private industrial building, little change in institutional building, a reduction of a third in commercial work and of a quarter in residential building. There is no doubt, says the report, that the architect has not taken his rightful place in the large volume of speculative homebuilding since the war. From the general trend of events in this country it looks to me as if in the drive for houses the architect is going to play a smaller part than he has done since the war. It is a significant fact that so far no architect has been appointed to a Local Housing Board.

## THE COST OF COMPETITIONS

In a letter on another page Mr. F. T. Bush suggests that I am opposed to competitions. This is quite wrong. I had hoped that the fact that I said that we all deplore the shortage of competitions would have conveyed this.

I am sure that competitions should be encouraged for, in addition to the R.I.B.A. building cited by Mr. Bush they have produced many other remarkable buildings in many countries. All the same I do not think that this is always apparent to the client who tends to see the picture differently. The expenditure of several extra thousands for the privilege of having a completely unknown young man to spend a million or so of your money erecting a type of building of which he has no previous experience requires considerable faith on the part of the client. From

his point of view it would be better and safer to go to an established man examples of whose work could be seen firmly standing on the ground unblemished by cracks or damp patches on ceilings. This line will very soon land me in an argument about job getting and I want to avoid that. I am merely repeating that from the client's point of view unless he be very enlightened, and few are, the competition system as at present organized is not attractive. I would like suggestions for brightening it up.

ABNER

## NEWS OF THE WEEK

### Golden Lane Housing Scheme Competition

The premiated and commended designs in the Golden Lane Housing Scheme Competition will be on view in the foyer of the Jarvis Hall, R.I.B.A., 66, Portland Place from April 8 to 10 inclusive and from April 16 to 19 inclusive, 10-7 (Saturday 10-5).

### The R.I.B.A. Board of Education Statement

The R.I.B.A. Board of Architectural Education consider that there is a need for further investigation into the problems of education and qualification. They have, therefore, arranged for a joint sub-committee of the Schools and Examinations Committees of the Board under the chairmanship of Mr. Donald H. McMorran, with the widest possible terms of reference, to receive evidence and to consider and report upon this important question.

The first meeting of the joint sub-committee will be held in April as soon as Mr. Donald H. McMorran assumes his appointment as Honorary Secretary of the Board of Architectural Education.

### Oxford Gas Works

The following statement has been issued by the Southern Gas Board:

"It is the intention and fixed policy of the Southern Gas Board to move altogether from the present site of the Oxford Gas Works, both North and South of the Thames, as soon as circumstances permit and present difficulties of removal and of the construction of new gas works elsewhere can be overcome in order to provide Oxford consumers with gas by other means and from other sources. But it is not possible to give undertakings as to date or to announce a definite timetable.

"The Board's hope is to cease to use the North Works for gasmaking in the course of the present year, though it may be necessary to reserve the retort-house there as a

stand-by for an emergency. It would be the Board's aim to vacate the North site within ten years.

"There are obvious difficulties in carrying out the complete transfer of works to another site, but the Board has no intention in the meantime of enlarging the present installations."

The next meeting of the R.I.B.A. Library Group will take place on Monday April 17 at 6 p.m. and will be devoted to the work and writing of W. R. Lethaby (1857-1931). Mr. John Brandon-Jones, A.R.I.B.A., will be the speaker.

## IN PARLIAMENT

### Starting Again

The Minister of Works, in a reply to Mr. Sparks on March 25, stated that the standstill on new building work ended on February 29. New starting dates since that time were being awarded according to the local availability of building labour. Appropriate priority was given to buildings required for defence and for the export trade.

### Decorating Under Control

Mr. Howard Johnson asked the Minister of Works whether, in view of the fact that painting and decorating did not consume materials in short supply, he would free painting and decorating work from all licensing restrictions. Mr. Eccles replied that he could not see his way to removing painting and decorating work from licensing control. There was a shortage of painters during the summer months. Licences were issued freely in winter months to reduce seasonal unemployment, and he would like to see more painting deferred from summer to winter. (March 25.)

### Cement Goes North

Miss Ward (Tynemouth) and Mr. Short (Newcastle-on-Tyne, Central) asked what the Minister of Works was doing to make an adequate supply of cement available to contractors engaged on housing projects in Newcastle and the northern region. Mr. Eccles said he was aware of the shortage of cement in this region. The cement companies had arranged to send substantial additional supplies. (March 25.)

### Advertising Appeals

Lt. Col. Bromley-Davenport enquired how many appeals were made under Section 31 of the Town and Country Planning Act, 1947, with regard to outdoor advertising during the 12 months ended December, 1951; and how many of these appeals were decided in favour of the local planning authorities and of the advertisers, respectively. Mr. Macmillan informed him that 558 appeals under the Advertisement Regulations were dismissed and 151 were allowed; a total of 709. (March 25.)

### Hotel or Offices?

Mr. Teeling questioned the Minister of Housing and Local Government about a proposal to convert into offices one of London's large hotels essential to the tourist traffic, which was now an important source of dollar earnings; and what was he doing to ensure that this modern hotel accommodation was retained for this purpose. Mr. Marples replied that the application for planning permission had, under the Minister's direction, been referred to him for decision, and the matter was therefore *sub judice*. (March 25.)

## APPOINTMENTS

Mr. Donald P. Reay, M.Sc. (Columbia), B.Arch. (Liverpool), A.R.I.B.A. Chief Architect and Planning Officer, East Kilbride Development Corporation, has been appointed Chief Architect and Planning Officer, Stevenage Development Corporation.

Mr. W. G. Dawson, senior assistant architect with Middlesbrough Corporation, is to take up new duties as principal architect to Greenock Corporation on April 7.

The L.M.B.A. has sent a donation of twenty-five guineas to the Builders' Benevolent Institution. The President of the B.B.I. this year is Sir Albert Braithwaite, D.S.O., M.C., M.P. for Harrow West.

The death has been announced of Mr. Herbert H. Reid, M.B.E., F.R.S.A., F.R.I.B.A., of Messrs. Edwards, Reid and Begg, at Colombo, Ceylon.



## Builders and Building Costs

Mr. J. Ian Robertson, President of the N.F.B.T.E., said at the Annual General Meeting of the Nottingham and District Association of Building Trades Employers on March 26: "Mr. Butler's announcement that the cut in food subsidies will mean a rise in the Cost-of-Living Index of about 4½ points and the decision of the Council of the Building Societies Association to recommend member societies to increase the minimum rate of interest for house purchasers from 4 to 4½ per cent are just two more instances of how building costs can rise through no fault of the builder. The service we provide for the people must be one they can afford and we shall do all we can by improved methods, better organization and more widespread bonusing to keep building costs down to the lowest possible level consistent with sound construction."

Mr. L. J. Holloway, Chairman of the L.M.B.A.'s Working Rule Agreements Committee, has been elected Chairman, and Mr. G. C. Marchant, Secretary of the National Association of Operative Plasterers, Vice-Chairman of the London Regional Joint Committee of the National Joint Council for the Building Industry for 1952.

The Administrative Committee of the L.M.B.A., headed by the President, Mr. D. E. Woodbine Parish, the three Vice-Presidents, the Honorary Treasurer and the Director, paid an official visit to the L.C.C. Exhibition, "London—the Next Twenty Years," at County Hall before it closed last week. The party was received and shown round by the L.C.C. Architect, Mr. Robert Matthew, and members of his staff, and afterwards entertained to sherry.

## Timber Licensing for Builders

On April 1 the Ministry of Works took over from Timber Control the consumption licensing of softwood, hardwood and plywood required for:—

- (1) all private building work (other than housing) costing less than £100;
- (2) all private building work (other than housing) carried out under a maintenance licence;
- (3) building contractors plant.

Applications for timber licences in connection with (1) and (2) should be made to the appropriate Regional Licensing Officer of the Ministry of Works. Timber licences for all housing work will be issued by the Ministry of Housing and Local Government.

Where timber for work under £100 has previously been issued by a Government Department other than the Timber Control the existing arrangements will not be affected.

Applications for timber for item (3)

should be made to Ministry of Works (A.S.72), Lambeth Bridge House, London, S.E.1.

## A.B.T. Statement on Education Cuts

The following resolution was passed by delegates representing architects, surveyors, civil engineers, town planners, and clerks of works in all parts of the country at the Annual General Meeting of the Association of Building Technicians held in Central Hall, London on March 15.

"This A.G.M. views with serious concern the dangerous economies in the Education Service proposed by the present Government.

It is particularly perturbed at the fact that these will:

(a) result not in a decrease (which is long overdue) in class sizes, a large proportion of which are already 45 or over in primary schools, but in an increase in the number of classes of 50 or more.

(b) involve the loss of nearly a complete year's programme of new school building at a time when new school places are urgently needed.

(c) still further restrict the development of many branches of technical and further education in which this country is already falling behind and upon which its future in the world depends.

Furthermore the meeting is of the opinion that the threatened continuation of the present cost limits in a period of rapidly rising costs must, if it is maintained, result in a serious fall in building or planning standards, or both.

Finally, this meeting points out that the achievement of even the revised programmes now to be authorized is entirely dependent on an adequate supply of building labour and materials particularly steel, lack of which is bringing the civil building programme nearly to a standstill.

This meeting, therefore, calls upon the Government to recognize the fundamental importance of education to the wealth and well being of this country and to withdraw the cuts now proposed and increase the amount spent on education to compensate for increased costs."

The meeting also passed a resolution protesting "strongly at the cuts in housing standards announced by the Government"; it also fully endorsed the action and recent statement of its Executive Committee on the same subject which had been sent to the Prime Minister and the Minister of Housing and Local Government.

## The History of Britain in Stone

The Ministry of Works has made available for purchasers of the 12-monthly Season Tickets to Ancient Monuments an illustrated brochure,

"The History of Britain in Stone," which gives particulars and pictures of the principal places in England, Scotland and Wales that can be visited under the scheme without extra charge. The places are listed by Counties.

Tourists from overseas and motorists, cyclists or ramblers who can spend some time exploring their own country, can buy for £1 one of these "Season Tickets to History" which will entitle two people to visit some 500 Ancient Monuments, Palaces and Historic Buildings in the Ministry's charge as often as the holder wishes during the twelve months from the date of purchase.

Historic show-places include those for which admission charges of 1s or 6d are normally made, such as: The Tower of London, Hampton Court Palace, Kensington Palace, Kew Palace, Edinburgh Castle, Palace of Holyrood House, Audley End Mansion, Lindisfarne Priory, Stonehenge, Avebury Museum, Old Sarum, abbeys and priories and many castles such as Carisbrooke, Walmer, Pevensey, Stirling, Tantallon, Caernarvon and Denbigh in England, Scotland and Wales.

Tickets may be purchased from The Ministry of Works (A.S.22), Lambeth Bridge House, London, S.E.1, or, in Scotland from the Ministry's headquarters at 122, George Street, Edinburgh; or from travel agencies.

## CORRESPONDENCE

### The Cost of Competitions

*"For clients I should have thought that the system had few attractions."*

To the Editor of A. & B.N.

Sir,—If for an outlay of a few thousand pounds a client can attract such a galaxy of designs (178 in all from the eminent and the lesser known) as was revealed in the recent City of London competition, he ought to consider himself handsomely rewarded.

A first-class scheme by its simplicity in design and layout may save vast sums in construction and immeasurable benefit to those who function these buildings and for just as long as such remain.

Judging by the response in this Golden Lane housing contest the answer, so far as the architect is concerned, seems to be clear and decisive, and, therefore, whilst the profession is so ready and willing to "have-a-go," let competitions be encouraged.

As the solution to any architectural design problem is primarily a matter of imaginative ideas and initial layout, should not the two-stage competition be more often employed as a time-saver for all concerned?

If vindication for the open competition system were needed, the R.I.B.A. Headquarters building in Portland Place surely supplies the answer to Abner's question under "Events and Comments" of March 20?

I am, etc.,

F. T. BUSH, A.R.I.B.A.





View from the garden in Abercrombie Square

**NEW BUILDING FOR CIVIC DESIGN DEPARTMENT**  
**LIVERPOOL SCHOOL OF ARCHITECTURE**

*for the University  
of Liverpool*

architect:

GORDON STEPHENSON,  
F.R.I.B.A. M.T.P.I.

assistant architect:

NORMAN KINGHAM,  
A.R.I.B.A.



THE University decided that a new building should be erected which, for at least the next twenty years, should be occupied by the Department of Civic Design. The decision was made possible because there was a vacant site in the corner of Abercrombie Square. In the Development Plan, prepared for the University by Professor Holford, the block containing this site is allocated to the Institute of Mathematics, and the Department of Civic Design is eventually to be in an extension of the School of Architecture. The vacant site was, however, too small for a building which would be of immediate value to the Institute of Mathematics, and it will be at least twenty years before the rest of the block will be available for building.

The main problem presented to the Architect, who is also the Head of the Department to occupy the building, was to design a building which would serve one purpose for a period and then at a later stage be capable of quick and easy adaptation for another use. He had to bear in mind also that the ultimate block development would include the building as a small connected wing flanking the corner entrance to the Square. In the immediate future the building has to satisfy the requirements of the Department of Civic Design.

#### The Site

The site, although small in size, is ideally placed at the end of a row of early nineteenth century houses of painted stucco, and from it there are views across Abercrombie Square.

The building site itself is rectangular and flat. The orientation is ideal for the Northern climate, the main axis being North-South. After the bombing of the houses the site had been levelled by the simple process of filling the cellars with rubble. This entailed excavation, and the building of a new basement was suggested because the foundations had to be below the level of the old cellars. There were no severe building restrictions as the building was to be modest in dimensions and domestic in scale.

#### Planning

The basement is primarily for storage and the heating plant, but it also contains a workshop. The storage space is in a series of compartments each flanked by precast shelves supported on 4½-inch brickwork. Each shelf is a little larger in area than an antiquarian sheet.

The ground floor contains the rooms which may be used by other departments of the University and the visiting public.

The Lecture Room contains seats for one hundred persons. At the platform end virtually the whole wall is covered by a glass blackboard lit by fluorescent lights concealed in the ceiling. A large glass-beaded screen, concealed in the ceiling, is easily unrolled when required by the release of a cord.

The back wall of the Lecture Room is faced, at the upper level, with acoustic tiles, and one of the flanking walls, veneered in French Walnut, follows a zig-zag line.

Adjacent to the Lecture Room is a small Modelling Shop. This can also be used as an ante-room.

On the other side of the Entrance Hall is the Criticism Room. The windows here are at clerestory level to allow drawings to be hung on the outer walls as well as the inner ones. Additional hanging space is provided by large hinged screens which normally form part of the outer wall, but which may be turned on wheels through ninety degrees to form cubicles. The long partition between the Entrance Hall and the Criticism Room contains clerestory lights. The pattern of the ceiling and the light fittings continues through the partition and increases the effect of space.

The Exhibition Hall is opposite the main entrance, and may be used for exhibitions by the Department of Civic Design or any other Department, and from time to time it will contain travelling exhibitions and works of art on loan.

Students of the Department of Civic Design work in the three rooms on the first floor. The Studio, almost 80 feet long and 27 feet deep, is designed for a maximum number of forty. The Library and Seminar Room are *en suite*, entered from either end of the Studio or from the landing hall. The pattern formed by the ceiling and the lighting fixtures carries

across the partitions which are glazed at clerestory level. The Studio has one large window, stretching from end wall to end wall, and from the ceiling to a wide terrazzo sill at bench height. It faces east and the daylighting is controlled by venetian blinds of the same type as those used in the other two rooms on the first floor. The desks, or benches, are a special feature in the room. They are table tops 6 feet wide and 17 feet long, which span between large plan chests of special construction and the steel channels supporting the window cills. There are no legs. Each table top rests on two trusses built in timber with plywood webs. The benches were designed by Messrs. Russell and Goodden from sketches prepared by the Architect.

The Library has an alcove containing the slide cabinets. The Librarian sits between these cabinets at a large desk combined with plan chests for maps. The back wall of the Library has built-in bookcases to clerestory height with space for portfolios at the lower level. At right-angles to the bookcases are two fixtures with sloping top surfaces on which books may be rested for reference.

The Seminar Room is for general use. It contains a wall blackboard, a built-in cupboard with a subdivision for each student, and a fitting containing a sink.

The Staff rooms are on the top floor and are, in effect, a suite of offices. Those on the eastern front face a roof terrace and those on the other side overlook the garden court.

#### Construction

The building is entirely steel framed. The east and west walls of the building, containing the main windows, are supported on cantilevers at floor levels. The columns are clear of the windows. Blinds and curtains move in the space between columns and windows. All the external walls are of 9in brickwork in Flemish bond, lined internally with flame-proof medium hardboard on battens. Internal partitions are, in general, of stud construction covered in medium hardboard. The roof and floors of the main block are in pre-cast reinforced concrete units resting on the steel beams. The "shed" roof of the Exhibition Hall is of channel reinforced wood wool slabs.

#### Elevations

It was a wish of the University, with which the Architect fully agreed, that the building should be in harmony with the three-storey houses forming the flanks of Abercrombie Square.

The new building continues the main cornice line of the square. A three-storey building is a most economical solution in frame construction, and a height other than that of the buildings surrounding the square would have been disturbing to the general composition. Rather than use a light common brick similar to that used in the construction of the adjacent houses, a robust facing brick was selected with a tone value near to that produced by the weathering of more than a century. The sill and head heights of the main window are similar to those of the main (first floor) windows in the Square. The windows, though designed for a new purpose, borrow much in detail from the hardwood sash windows in the Square. In particular, the tapering shapes of the bars reduce the glare contrast.

At the rear of the building is a welded steel spiral fire escape leading into the courtyard. The heads and sills of all windows are in cast stone. The window frames and bars are in hardwood with the exception of the patent aluminium glazing bars in the North light.

#### Internal Finish

The Entrance Hall, corridor and stair walls are painted in two shades of grey. Exposed steel columns are in grey. The walls in nearly all the rooms, large and small, are covered by wallpapers. This, it was decided, was the best economical finish for the medium hardboard to which drawings may from time to time be pinned. In the Criticism Room where drawings will frequently be pinned up the medium hardboard is covered with hessian and painted. The wallpapers have simple overall patterns and the scale of the patterns and the colours are varied according to room and location.

The ceilings in the building are formed by 2ft square

[Continued on page 394]



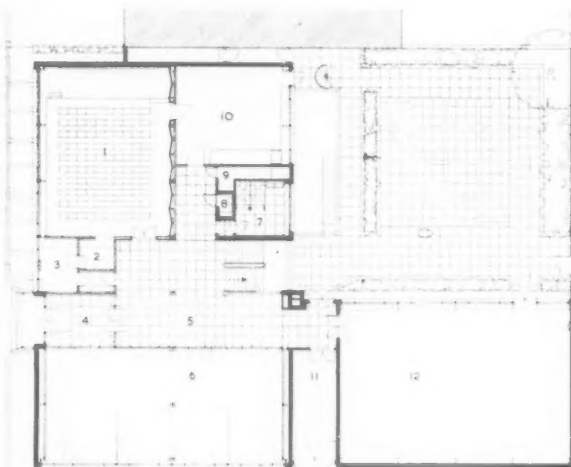
FIRST FLOOR

KEY: 1. Studio. 2. Library. 3. Landing. 4. Men's Lavatory. 5. Duct. 6. Seminar Room.



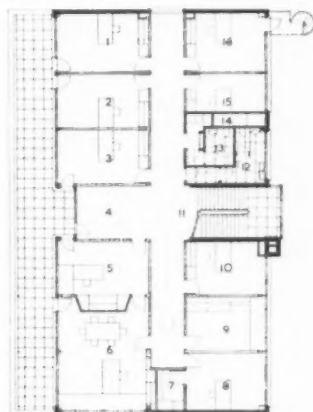
BASEMENT

KEY: 1-5. Store. 6. Oil fuel tank. 7. Heating Chamber. 8. Landing. 9. Electric Equipment and Store. 10. Cleaners' Room. 11. Workshop. 12. Duct.



GROUND FLOOR

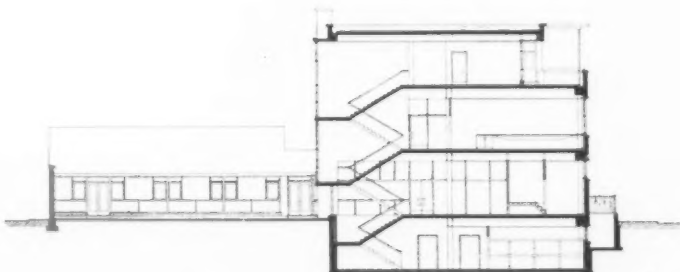
KEY: 1. Lecture Theatre. 2. Projection Room. 3. Porter. 4. Vestibule. 5. Entrance Hall. 6. Criticism Room. 7. Women's Lavatories. 8. Public Telephone. 9. Duct. 10. Modelling Shop. 11. Store Room. 12. Exhibition Hall.

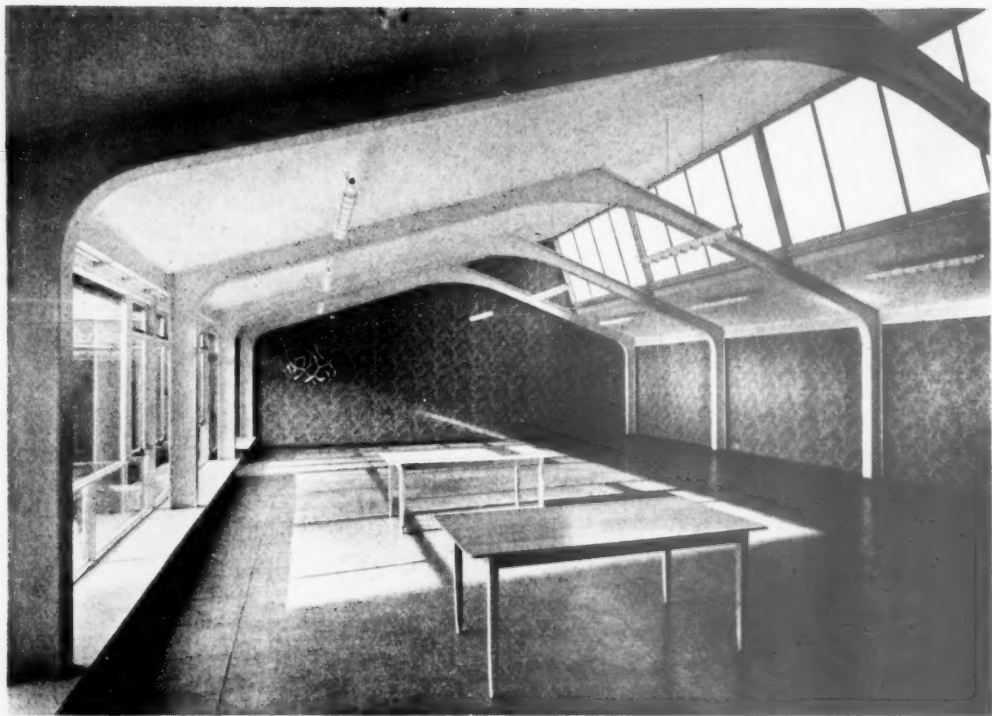


SECOND FLOOR

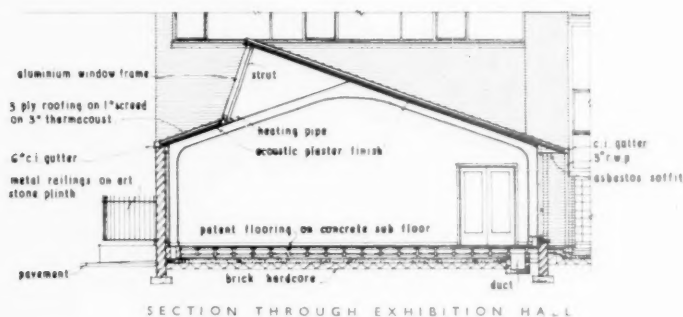
KEY: 1-3. Staff Rooms. 4. Waiting Space. 5. Secretary's Office. 6. Professors' Room. 7. Store. 8. Senior Lecturers' Room. 9. Editorial Room for the Town Planning Review. 10. Staff Room. 11. Landing. 12-13. Staff Lavatories. 14. Duct. 15-16. Staff Rooms.

SECTION





The Exhibition Hall is spanned by welded steel portal trusses. The roof lighting faces North. South-facing windows are on the garden court side. The walls are covered with dark patterned wallpaper, and the brass wall sculpture is by Mitzi Cunliffe.



SECTION THROUGH EXHIBITION HALL

continued from page 392]

panels of insulating board with secret slots in which are aluminium T rails suspended from the pre-cast floors. All the ceilings are painted white, and the light fittings, varying according to the purpose of the rooms, are related to the pattern formed by the 2ft grid. In the rooms separated by partitions with clerestory lights the ceiling and light fitting pattern continues through the partitions.

#### Services

The heating system in the building is fed by two oil-fired boilers, automatically controlled and operated by electricity. There is also a small boiler for use in the summer to heat

the domestic hot water, but when the main boilers are in use this water is heated in a calorifier.

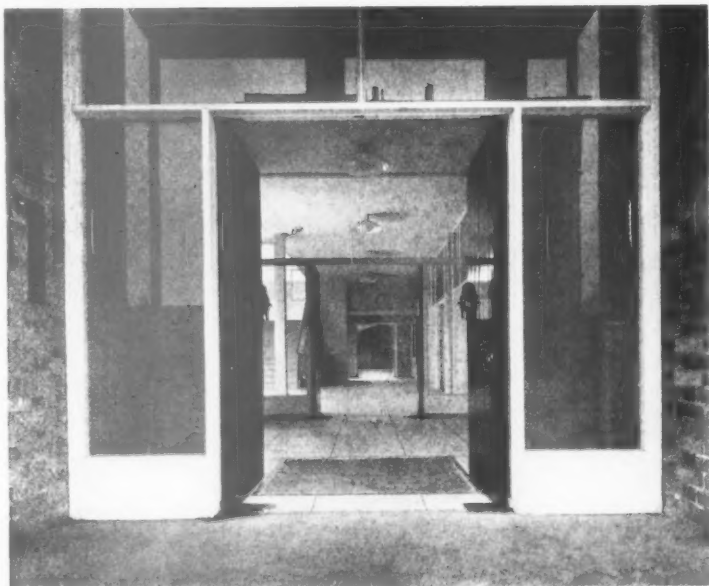
#### General

Before the building was designed a price of 4s 6d per cubic foot was set by the University and a price for the whole building established when the first sketch was made. Despite increases in building workers' wages and rising prices the cost of the building when completed was only a fraction above the original estimate. The contract price was £57,000 excluding movable furniture, but including built-in furniture, all fittings and garden layout. The price per ft cube was 4s 5d and per foot square 63s.

The Entrance Hall, looking towards the Exhibition Hall and the Staircase. The clerestory windows on the right allow a view of the Criticism Room.



View from the Entrance Hall. On the left the staircase is just visible. The staircase window is the main source of light in the Entrance Hall.

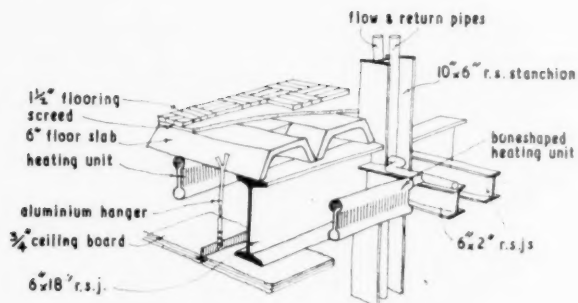


GENERAL CONTRACTORS: Wm. TOMKINSON & SONS LTD.

#### Sub-contractors

Artificial Stone: Pearson Bros. & Campbell Ltd. Bricks: Wm. Tomkinson & Sons Ltd. Casements: Wm. Thornton & Sons Ltd. Central Heating: The Granwood Flooring Co. Ltd. (Heating Dept.). Dampcourses: Wm. Briggs & Sons Ltd. Decorative Plaster: Decorators Ltd. Electric Wiring: Merseyside & North Wales Electricity Board. Electric Clocks and Bells: Merseyside & North Wales Electricity Board. Electric Light Fittings: Merchant Adventurers of London Ltd. Furniture: Ernest Race Furniture Ltd., Gordon Russell Ltd., Scottish Furniture Manufacturers Ltd., Gordon Furniture: Ernest Race Furniture Ltd. Glass: Hill, Lambert & Co. Iron Staircases:

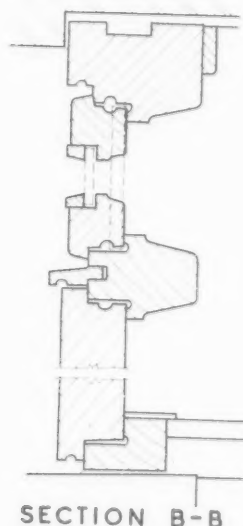
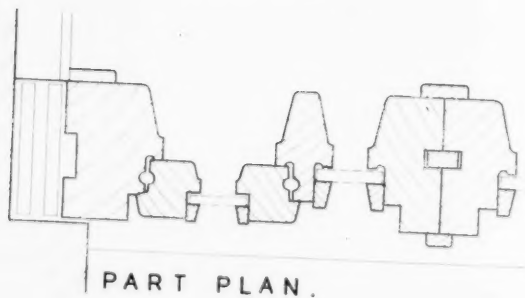
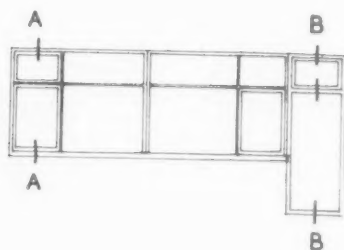
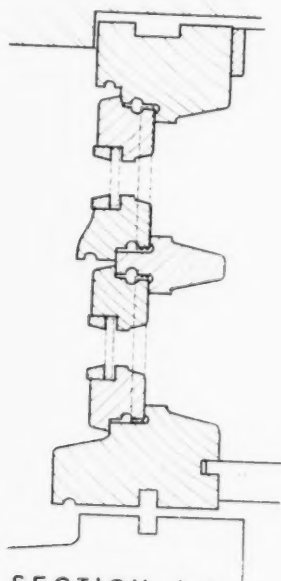
Quiggin Bros Ltd. Joinery: Wm. Tomkinson & Sons Ltd. Metalwork: J. R. Pearson Ltd. Partitions: Wm. Tomkinson & Sons Ltd. Patent Glazing: Williams & Williams Ltd. Patent Flooring: Conways (Tiles and Terrazzo) Ltd., The Granwood Flooring Co. Ltd. Plaster: Wm. Tomkinson & Sons Ltd. Plumbing and Domestic Hot Water Installation: Mersey Plumbing Co. Ltd. Reinforced Concrete—Precast Floors—Truscon: Wm. Tomkinson & Sons Ltd. Roofing and Roofing felt: Wm. Briggs & Sons Ltd. Sanitary Fittings: Musgraves (Liverpool) Ltd. Shrubs and Trees: Rees Ltd. Stair-treads: Conways (Tiles and Terrazzo) Ltd. Structural Steel: Redpath Brown & Co. Ltd. Telephones: G.P.O. Tiling: Conways (Tiles and Terrazzo) Ltd. Sunblinds—Venetian: J. Avery & Co. Ltd. Wallpapers: Decorators Ltd. Window and Door Furniture: Chubb & Sons Lock and Safe Co. Ltd. Windows—Hardwood: William Thornton & Sons Ltd.



Part of the Garden Court and the rear of the building. The sculpture, by Mitzi Cunliffe, is at eye-level from the sunken part of the court and it is seen from the Exhibition Hall and the stair half-landings.

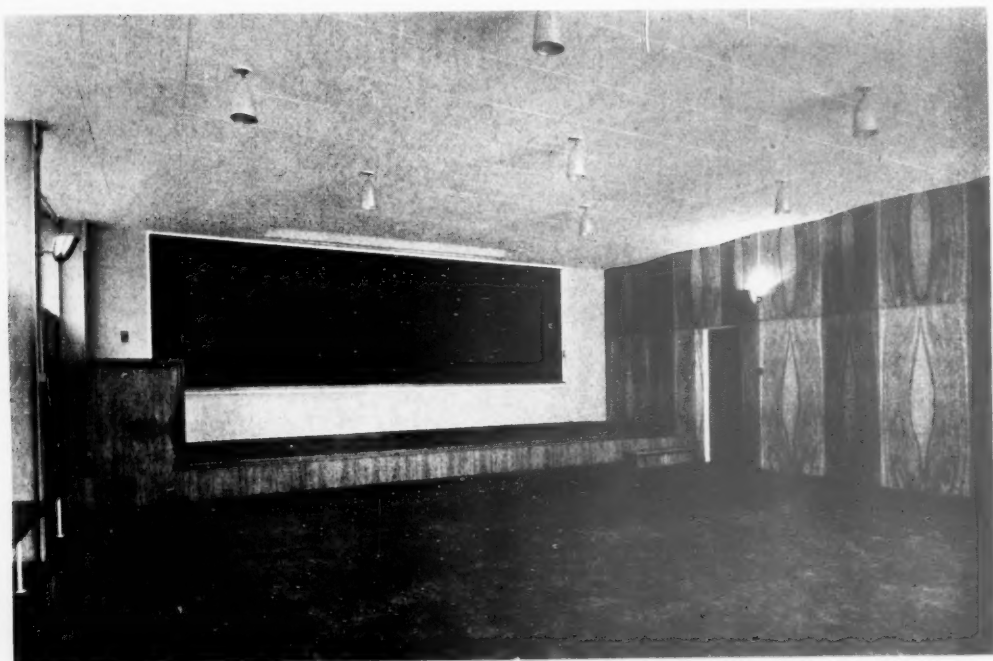
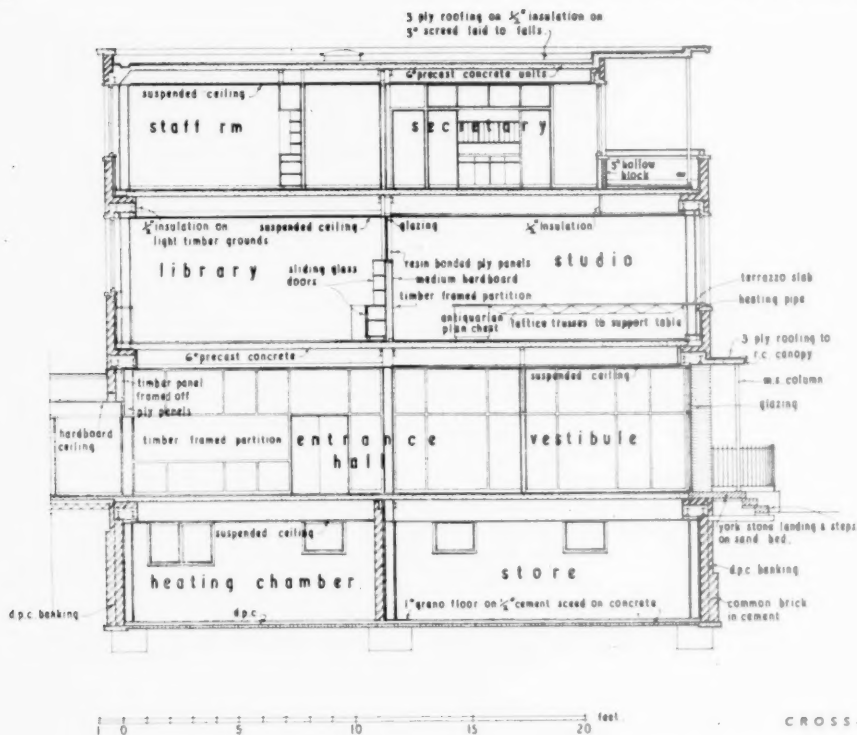
On the left is an isometric view of the floor construction used in the building.

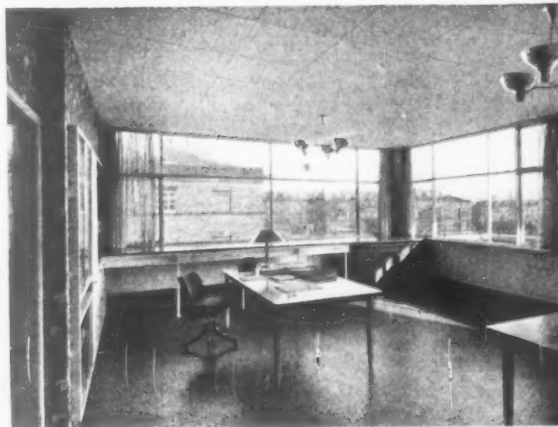
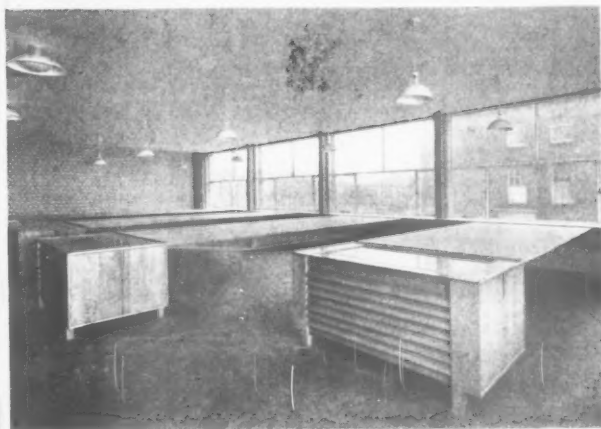
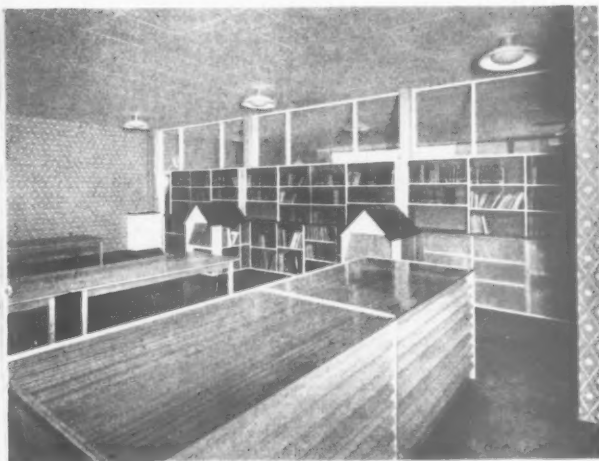
# NEW BUILDING FOR DEPARTMENT OF CIVIC DESIGN, LIVERPOOL











Top left.  
The Library which is en suite with the Studio. The whole of the end wall can be seen from the Studio or the Library. The clerestory windows also allow views across the building. In the foreground may be seen large chests for maps. Adjacent to the bookcases are lecterns for use when students are searching in books for references.

Top right.  
A typical room for a member of Staff. The built-in fittings at the back form the partition between room and corridor.

Bottom left.  
View taken from the central Entrance Door to the Studio. Lighting from the windows is controlled with Venetian blinds. The six feet wide desks span from the plan chests to steel channels under the wide terrazzo window cills. The tables and plan chests were designed by Gordon Russell and Robert Goodden.

Bottom right.  
The room for the Head of the Department is on the top floor overlooking Abercrombie Square. The north-facing window is double glazing. The room is also used for staff meetings and small conferences.

❧ The Lecture Room. The wall facing the windows is veneered in French Walnut. The blackboard is in glass. The screen rolls into a ceiling box immediately behind a trough containing concealed fluorescent lamps which a lecturer may switch on to illuminate the blackboard.

NEW BUILDING FOR DEPARTMENT OF CIVIC DESIGN  
SCHOOL OF ARCHITECTURE, UNIVERSITY OF LIVERPOOL

## BUILDING EXPANSION

*The Minister of Works, the Rt. Hon. David Eccles, M.P., speaking at a luncheon of the National Council of Building Materials Producers at the Connaught Rooms, on March 25, said:*

"Builders and civil engineers, who make the market for your products, can raise their output by a quarter if they have the freedom, the incentives and the materials to do so.

"As it is, masters and men turn out in five days what they know well could be done in four. Here is a challenge which must be accepted. The Government and leaders in all sections of the building industry must get together and demolish the obstructions, which have grown thick and fast since the war, to better work and higher output.

"This is what I am trying to do. When I talk to manufacturers and contractors I always have in the back of my mind the thought that before the industry can get fully under way the Government must get out of its way.

"If the demand for your products is to expand the builders must have more freedom. The post-war planning and controls have halted and held up the smooth progress from one job to another. The only man who really knows when his business needs more work is the builder himself. Too often the licensing system has taken away the responsibility which the employer should carry in deciding the time-table of work; when these decisions are in someone else's hands his costs rise and his output falls.

"Mr. Macmillan and I realize the damage done to the rate of building by restrictive controls. We cannot sweep them away at once. Indeed, we must wait for the Government's credit policy to have its effect and cleanse the economy. We are, therefore, concerting action to dismantle them by stages and thus to restore responsibility to the men who will manufacture materials and put up buildings much better if the Government does not try to do their job for them.

"The second factor in expansion is incentives. The best incentive is the confidence that when a building job ends another will be there to follow on. But we also want to earn and keep a reward that seems in proportion to the effort we make. Mr. Butler in his Budget has taken the first and a big step in the right direction. The increased income-tax allowances will increase production. When in June the changes in P.A.Y.E. come into operation the men will see that overtime brings in more than it did.

"But whatever the Government does on the score of incentives there can never be a substitute for an adequate supply of building materials. Steel will have to be husbanded while the Defence Programme is being carried out. As Minister of Works I am as interested as any producer in the future of the market for the materials represented on your Council. The long-term outlook

is good but we must watch closely the immediate position which is not free from difficulty.

"Take first finance. The Government's policy of stiffer interest rates is an essential weapon in the campaign against inflation. Dearer money will add to the costs of the building industry, but the burden brings its reward, for when there is an end to inflation it will soon be possible to make a bonfire of licensing for all but the big jobs. In the meantime, I can help by speeding up the payment of contractors' accounts owing by the Ministry, and Mr. Macmillan is encouraging the Local Authorities to do the same.

"I know, too, that there is a hesitation in some markets for materials, due either to changes in housing plans to meet the new standards, or to some destocking by those who think that prices are high enough, or to the difficulties of maintaining sales in export markets. All these matters I am watching. I think the difficulties are temporary and will disappear as our expanding programme gets going. Indeed it does not need much argument to prove that unless you produce more materials the rate of house building will fall short of our declared policy.

"In one section of the licensing system I am trying now to give more freedom and that is the conversion of old houses into flats. When licences for conversions are held up I am arranging for Local Authorities to consult us before turning down any desirable scheme.

"Coming back to building materials we are all interested in their price. I found that the Ministry of Works was operating a number of price-controls which had outlived their usefulness. I have done away with nearly all these controls against assurances, which the producers most readily gave, to keep prices steady this year unless there are further big changes in costs.

"When I began this process of decontrol I was told it was highly dangerous because the manufacturers would gang up and charge excessive prices as soon as the Ministry's policemen were taken off the beat.

"I had two answers to these advocates of permanent controls: first I said I believed in freedom as a principle; secondly, in the particular case of the producers of building materials, I had confidence in their sense of responsibility. I am sure this is a good risk. But you should be under no illusion what will happen if the new arrangements are abused. First the Government's policy of encouraging expansion by restoring freedom to industry will be discredited; then Mr. Aneurin Bevan might win the next election, and if that happened the producers of building materials would be nationalized.

"So you see that you and I are literally in the same boat. We keep our jobs or get the sack together. In fact, we are going to stay where we are because we are going to make a success



Mr. H. C. Husband, B.Eng., M.I.C.E., M.I.Mech.E., M.I.Struct.E., M.Ins.W.E., of Husband & Co., Consulting Engineers & Architects to the British Iron & Steel Research Association for the New Research Station in Sheffield illustrated in the article on Sheffield and Rotherham.



Mr. L. T. Boyman, F.R.I.B.A., Head of the Architectural Department of Husband & Company.

of our policy, and that means that private enterprise under a Conservative Government will be seen to be serving the best interests of the public.

"We shall be judged by our record; so let us work together as a team and show that we know how to do our job well."

# SHEFFIELD AND ROTHERHAM

*A review of some post-war buildings designed by private and official architects in the area comprising the City of Sheffield, the Borough of Rotherham and the surrounding districts.*

THE Sheffielder, contrary to the view of many outsiders is not merely satisfied to live in Sheffield; he likes living in Sheffield. To those who may think that the City is a dirty place where knives come from this satisfaction of the Sheffielder with his lot may suggest content amounting to apathy.

Far from it.

The Yorkshiremen and the men of Derbyshire have two attributes which do not always go hand in hand: they like working hard and they like comfort in their living conditions. In Sheffield both these factors are attainable without much fuss. Sheffielders don't like fuss. They are practical people. In the sitting of their City, they are also fortunate people. For, by comparison with others whose work makes it necessary for them to live within reach of the larger provincial cities and towns, the working population of Sheffield—no matter what their income group—have rare geographical advantages.

To the motorist passing through the heavy industry area lying in the valley on the Rotherham Road, or to the business man on a short visit who sees little more than the station, the hotels and the parking problem, these advantages may not be immediately apparent.

Moreover, since the war, Sheffield has done less than some towns to remove or cover up its bomb scars. At first sight all this may suggest a lackadaisical approach to the complex replanning and expansion problems with which the authorities have to deal.

Again, far from it.

The redevelopment plan for the City itself is still under consideration. Its final form is likely to be made public later this year. Nevertheless, the amount of development which has taken place since the war is considerable. Here again the geography of the City and its immediate surroundings has in some ways been of direct assistance.

The many hills over which the existing building area is spread are separated by steep and narrow valleys. This formation has prevented the suburban ribbon development which mortifies so many of the approaches to other cities. These unspoiled valleys are like long fingers from the outlying country which probe right into the heart of the city. And the roads which lie along the fingers provide a means of reaching exquisite country cheaply and in a very short time. It is possible, therefore, to live within a few minutes of the City centre while enjoying all the benefits of country—not suburban—existence.

Part of this country is now being used for development and the examples of building illustrated in this review show some current trends. Final judgment on future development in this area must await publication of the new plan for the city.

The road from Sheffield to Rotherham is not pleasant. The Industrial Revolution left its mark on most large cities and this stretch of road is no exception. The practical advantages which accrued are not always obvious to-day, when so many of the products of these centres go overseas to improve the conditions in other countries, leaving England to gaze ruefully at the unplanned, overgrown and congested groups of buildings known by their grime and ugliness as industrial centres. Such is the road from Sheffield to Rotherham. Recrimination, however, is valueless. Two things are now urgent: first, that existing centres of production, however aesthetically repugnant they may be, continue to produce at maximum speed; second, that all development which takes place from now on shall be well designed and capable of expansion without creating further congestion in 50 years time or less.

To architects the fulfilment of the last-named desiderata may appear to be a relatively simple matter. But in any town—and Sheffield and Rotherham are no exceptions—there are

three factors which can and do prevent both good design and expansion. These factors are ground space, the client and hard cash.

In this area, because of the surrounding country, decentralization is still possible; but only, of course, for some types of building. One example is the new Dronfield Bakery. Schools and housing, too, can be placed away from the Town itself. But with existing factories, particularly for heavy industry, the problem is not easily soluble.

In the case of Sheffield, a first step in replanning of industry has been made which at first sight is contrary to practice elsewhere. Light factories have been and are being built in the City, replacing bombed or derelict slum areas. But, because of the proximity of suitable outlying areas for housing, the travel problem is not aggravated as it might be in other towns.

Housing presents its own difficulties. Design, as elsewhere in the country, is confined by cost and the results in the areas visited vary between mediocre and very fair. But it is encouraging that in the surrounding rural districts an attempt is being made to retain stone building. For financial reasons and labour reasons, however, this policy is obviously, but regrettably, not feasible for the larger schemes. The cost of building, moreover, tends to be increased (a) by the contours of the ground which, on some of the sites, result in steep approach roads and extra expense in the foundations, (b) by the risk of subsidence in mining areas.

A great deal of post-war housing has been done, notably by the local authorities.

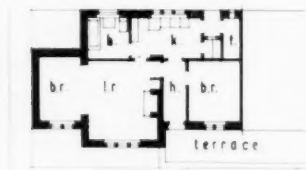
On one large estate the greatest disappointment to the planning authorities, in face of the progress made, has been the fact that, in order to maintain the rate of building, bricks have had to be used as they

[Continued on page 116]





The Hartington Memorial Homes designed by Mansell Jenkinson & Son are an example of the use of stone in an endeavour to preserve rural harmony. See plan below.

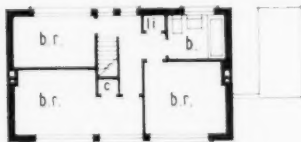


PLAN

## HOUSING

Of the numerous housing estates in progress in the Rotherham and Sheffield areas, the accompanying illustrations are good examples. The character of the old villages cannot be recaptured in new building while the stonemason's craft has to give way to bricks. Speed and quantity are the essentials.

These and a marked effort to overcome the effects of cheap finishing materials by good design are to be found on the Broom Valley Estate at Rotherham. This estate, one of many which are being developed by the Rotherham housing department under the Borough Engineer, E. J. Manson, Esq., and the deputy Borough architect, G. Raven, Esq., A.R.I.B.A., lies about a mile from the centre of the town. The Council took over the site for housing development in 1949. There are about 650 houses and flats in the



FIRST FLOOR.



GROUND FLOOR.



Houses on the Broom Valley Estate, Rotherham. Cost was approximately £1,275 per house. Walls are 1 1/2 in brick externally with 4 1/2 in brick for internal walls which go up to the roof. Other walls are of breeze. The chief assistant architect in charge was C. A. G. Beacher, Esq., Dip. Arch., A.R.I.B.A. Below, the new 3-bedroom, 5 person detached house on the Broom Valley Estate, Rotherham, see plans at foot of left hand column on this page.







A great deal has been done in this area to provide old people's dwellings. Shown here is a development by the Sheffield City planning authorities. The houses are built round an oblong courtyard on rising ground. At the lower end of the court is a communal room. At Pitsley, Messrs. Mansell Jenkinson & Son have built old people's dwellings—the Hartington Memorial Homes—in stone. The houses have a living room with bed recess, a separate bedroom, kitchen, bathroom and fuel store. The front door opens on to a terrace. See top of facing page.



scheme and provision is made for a central unit of shops, etc. Of the total 650, 350 houses have been completed. Houses are faced with rustic brick.

The latest development here is a three-bedroom five-person detached house, see page 402. The floor area is 972 square feet.

The tender price for the new type was £1,273 inclusive of paths, drains and site work, in January 1951.

## SCHOOLS

So far post-war school building seems to have kept pace with the housing. A notable example of a special school is the Maud Maxfield School for Deaf Children designed by the Sheffield City Architect. This school is built on one level with wide corridors serving classrooms on one side, and windows overlooking the play courts on the other. Special facilities include amplifying rooms for individual tuition; these rooms are sound-deadened cubicles without windows. In the assembly hall rhythm and music are conveyed to the deaf largely by impact and vibration picked up

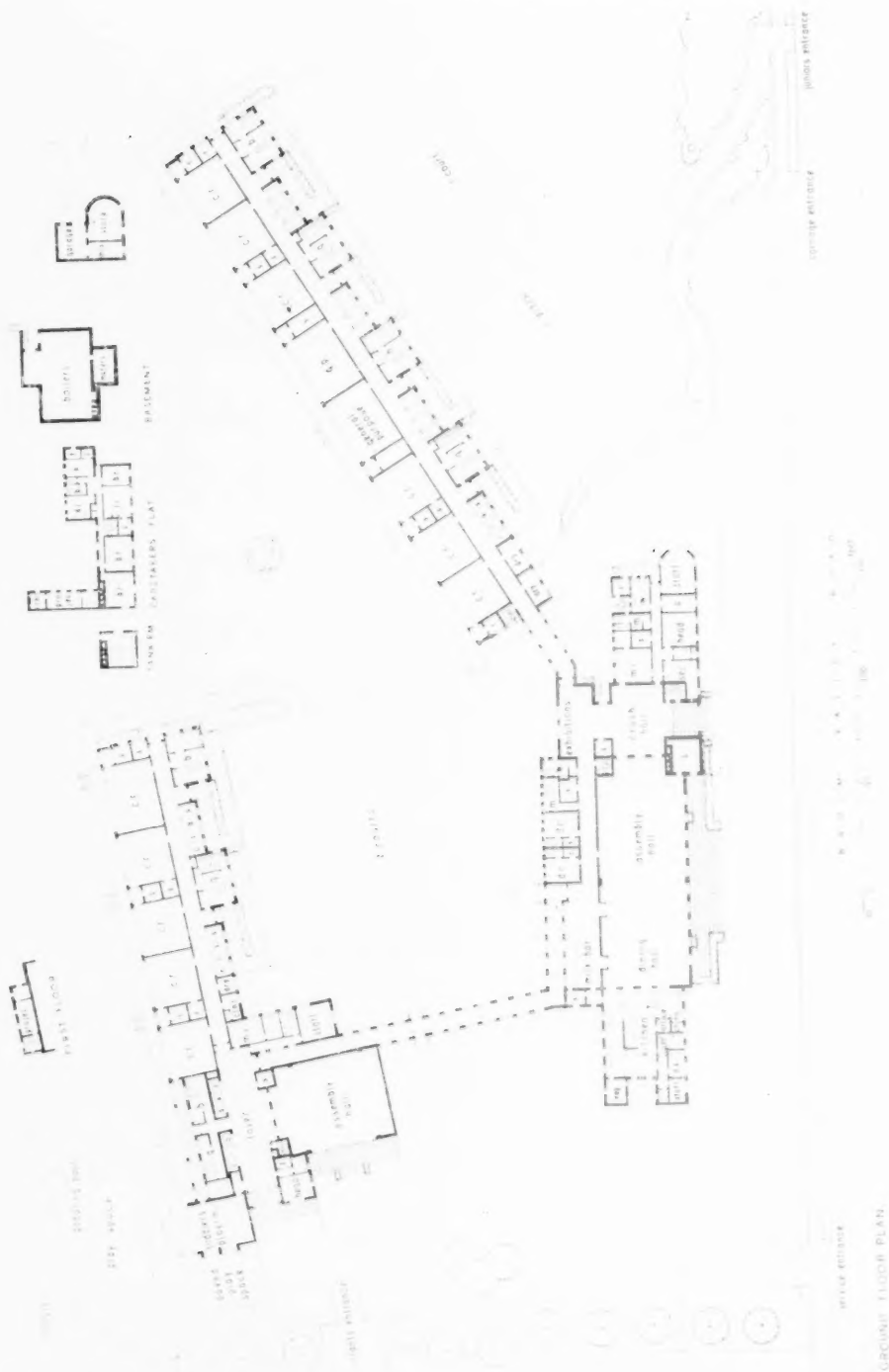
[Continued on page 405]

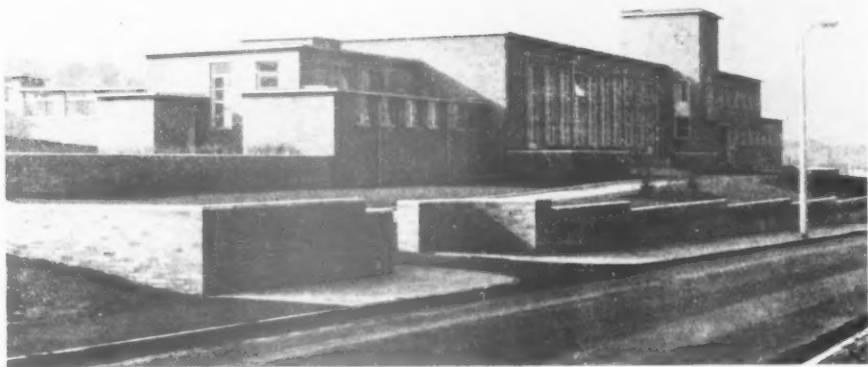


Above left, The Maud Maxfield School for Deaf Children. The illustrations, above left, show the main entrance with assembly room in right foreground; the interior of the assembly hall which has a sprung floor to aid the children in recognizing sound by vibration; one of the corridors from the entrance hall. Above right, is the main entrance to Totley, Sheffield, primary school.

# BROOM VALLEY COUNTRY PRIMARY SCHOOL

Rotherham Deputy Borough Architect: G. Raven, Esq., A.R.I.B.A.

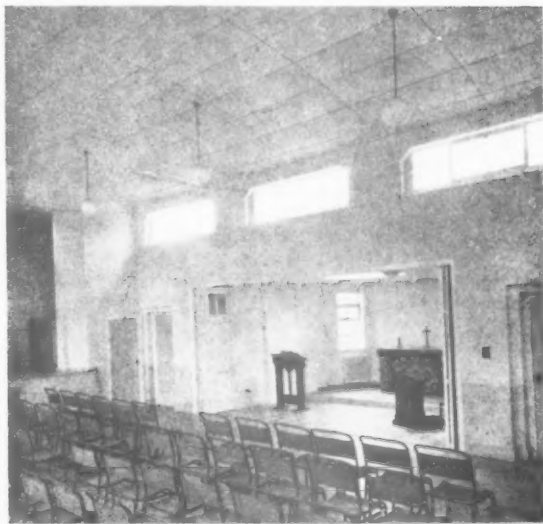




Above and right: views of the Broom Valley County Primary School near Rotherham; cost £122,972 3s 10d (contract figure) in 1949. Safety glass is fixed in the lower lights of the assembly hall windows and in all glazed doors throughout the building.

On a nearby site one of the largest technical schools in the county is now in course of construction.

The Deputy Borough architect in charge of the design of both schools is G. Raven, Esq., A.R.I.B.A.



The interior of the community hall at the Broom Valley Estate, designed by Mansell Jenkinson & Son. An exterior view is on page 406. The hall has dual capacity as church and place of entertainment and here the seating is set for church service.

Continued from page 403]

from the piano and transferred through the sprung floor to their feet. Coloured lights are also used as an aid to teaching. Several other schools in the outskirts of Sheffield have been completed since the war.

In the Rotherham area a new county primary school for the Education authority has recently been completed on the Broom Valley Estate. The architect was G. Raven, Esq., A.R.I.B.A., assisted by E. Wormald, Esq., A.R.I.B.A., A.R.I.C.S., A.M.T.P.I., assistant Borough Architect, and by A. Crisp, A.R.I.B.A., A.M.T.P.I., chief Assistant Architect (schools). The Quantity Surveyors were Henry Vale & Sons of Wolverhampton.

This school provides accommodation for 320 Junior Boys and Girls and 240 Infants. The connection between the departments is by means of a sloping covered corridor.

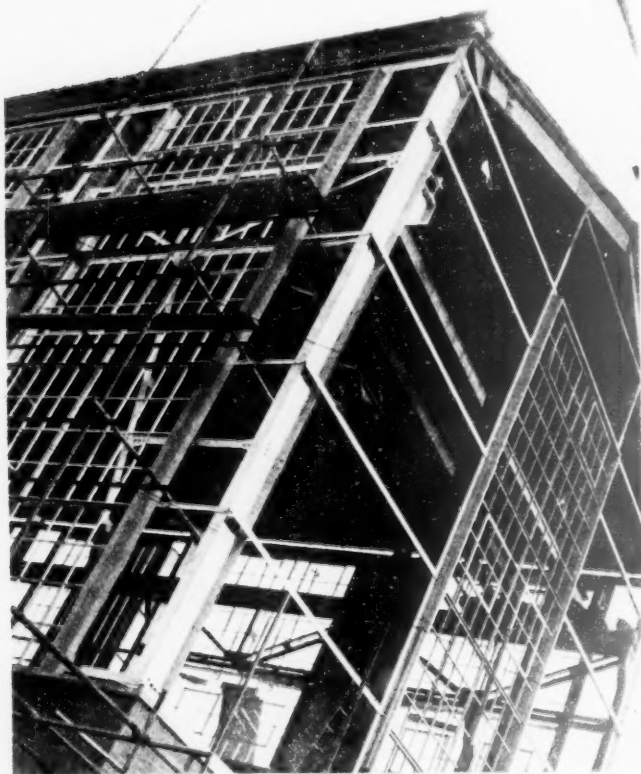
Work was commenced in January, 1950, the Junior classrooms were handed over in May, 1951. The whole school was completed in November 1951. The contract price in December, 1949, was £122,972 3s 10d.

## ECCLESIASTICAL

Both Sheffield and Rotherham have fine places of worship. The Parish Church of Rotherham is a building of great elegance, standing high and commanding the centre of the town.



The church Hall at the Broom Valley Estate near Rotherham, above left, was designed by Messrs. J. Mansell Jenkinson & Son, F. A.R.I.B.A. The picture shows the Cross on the ridgepole which stresses the cross axis on which the altar is placed. In the foreground are the dressing rooms behind the stage. Above right, a chapel designed by the late Sir Charles Nicholson in Sheffield Cathedral.



Metal windows at high level separated by panels of corrugated trifford tile form the upper walls of the melting shop at the new B.I.S.R.A. Research Laboratories designed by Husband and Company. Details of the window framing and asbestos sheeting are at the top of the following page.

In Sheffield there is the Cathedral, and above on this page is an illustration of a chapel in the Cathedral—one of the last works of the late Sir Charles Nicholson.

To meet the needs of members of the new housing estates economy dictates a combination of place of worship and place of entertainment. At the Broom Valley Estate, J. Mansell Jenkinson & Son have solved the problem of combining the two purposes in one building with a cross-axial plan.

On the long axis the hall can be used for dancing, concerts and stage shows; the stage being opposite the entrance doors. On the short axis an apsidal sanctuary is provided, opening off the centre of one long side of the hall but divisible from it by widely opening doors. When used as a church the chairs are turned to face the altar. Externally this axis is stressed by a cross on the ridge of the roof.

This building is intended to be additional to, and not a substitute for, the Parish Church.

The building is faced with rustic, honey-coloured facing bricks. Paintwork on the entrance doors is bright red: a colour which by its cheerfulness is suited either to religion or to entertainment.

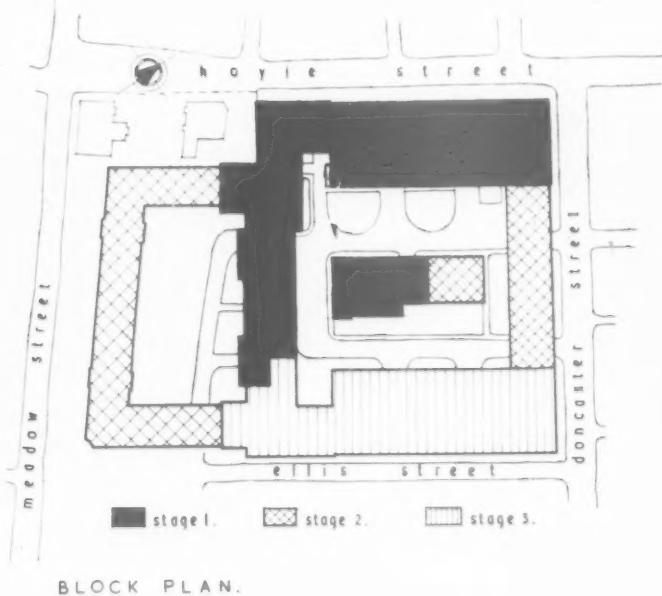
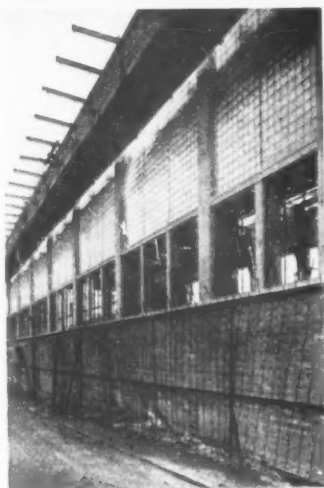
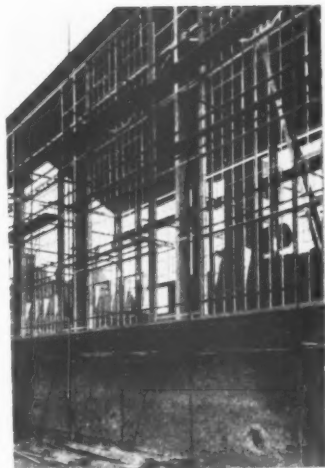
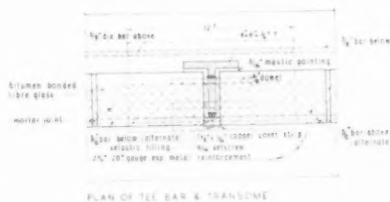
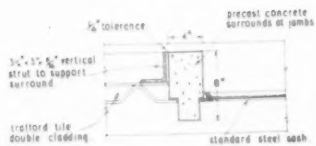
## R E S E A R C H

Two of the most important buildings in view of the paramount need for steel economy at the present time are research laboratories.

The British Iron and Steel Research Association and the United Steel Companies are the organizations responsible for these buildings.

In Sheffield itself, at Hoyle Street, the first stages of the new B.I.S.R.A. Research Station designed by Husband and Co., consulting engineers and architects, for the British Iron and Steel Research Association are now nearing completion. The site has been chosen to provide metallurgical research facilities in the centre of the steel industry. The new buildings are designed to contain much of the equipment of a steelworks in miniature. The first of three stages of development consists of three buildings: a single-storey melting shop and a

The photograph, right, shows how the window frames of the melting shop at the B.J.S.R.A. laboratories are set at high level centrally between the portal frames. The space between each portal frame and its adjoining window frame is sheathed as shown in the drawing right, above. The lower drawing shows the T-bar joints in the glass brick walling of the mechanical workshop. These bars can just be seen in the centre picture in the right hand column.

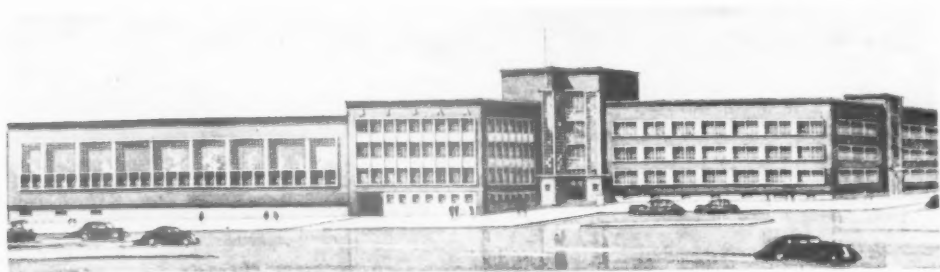


BLOCK PLAN.

Above : glass brick wall in the mechanical workshop of the B.I.S.R.A. laboratories.

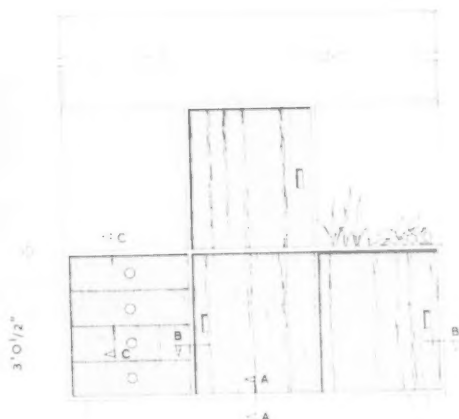
Left: a block plan showing the stages of development. The black areas are under construction. The mechanical working plant hall faces Hoyle Street. The melting shop is the freestanding block.

Below : an impression of the completed building with the workshop block on the left.

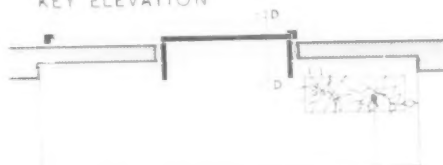




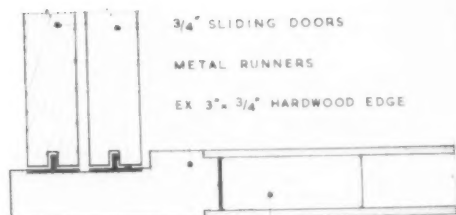




KEY ELEVATION

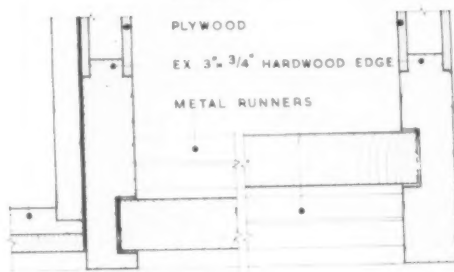


KEY PLAN SCALE 1" = 2'0"

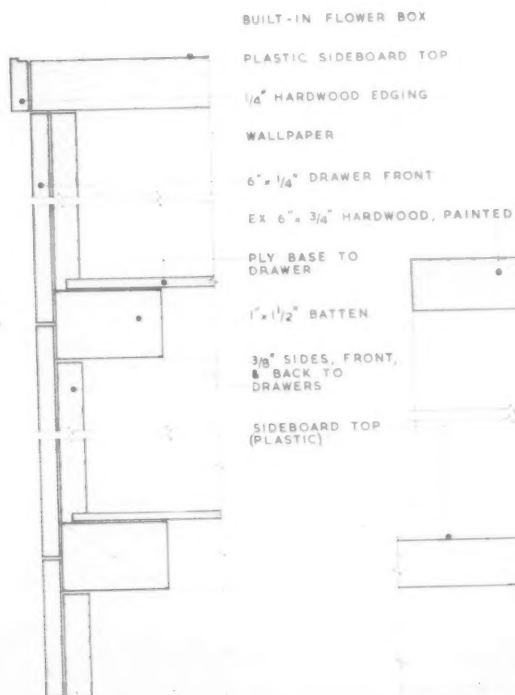


1/2 F.S. SECTION A-A

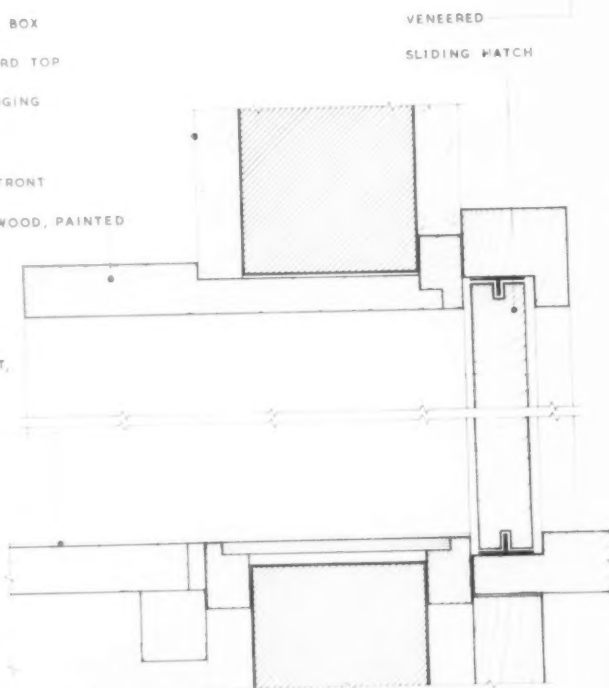
BEARER  
DRAWER FRONT  
PLYWOOD  
EX 3" x 3/4" HARDWOOD EDGE  
METAL RUNNERS



1/2 F.S. PLAN AT B-B



SECTION 'C-C'

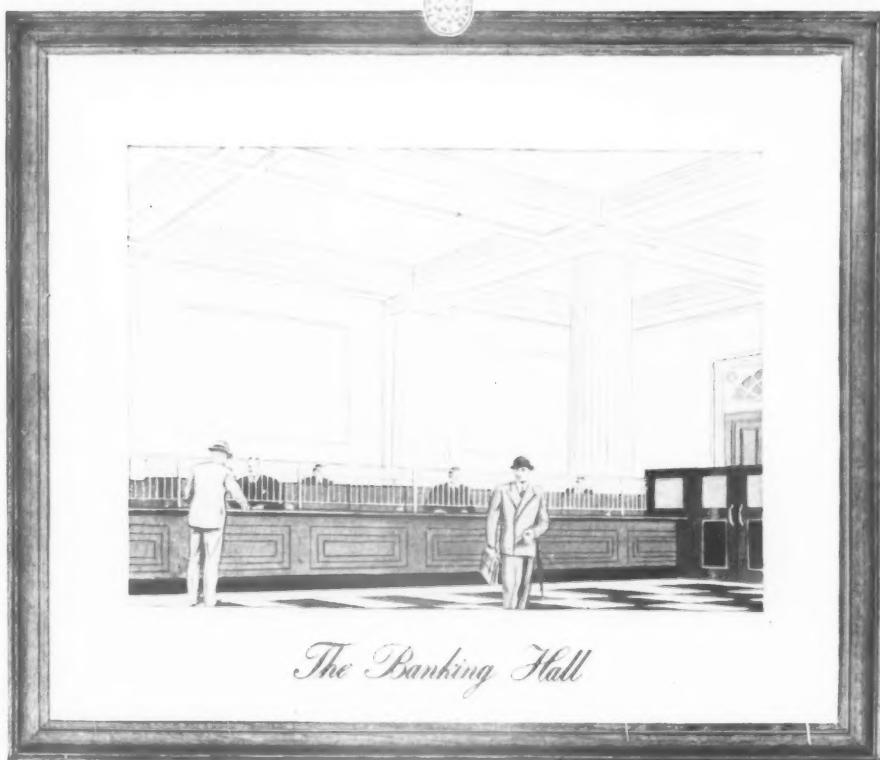


SECTION 'D-D'



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DESIGNER: MICHAEL LYELL

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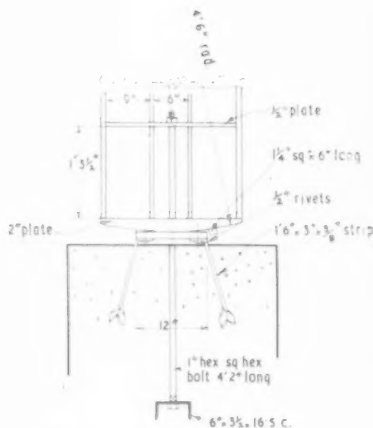


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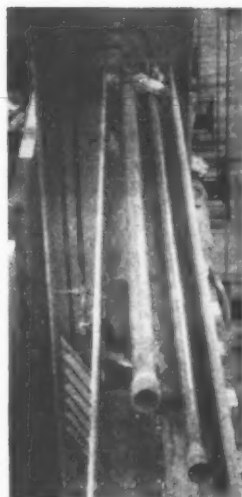
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DETAIL OF STEELWORK BASE



Above left: a view of one of the rocker foundations of the portal frames of the mechanical working hall in the B.I.S.R.A. laboratories. See also section, above, centre. In the right-hand picture can be seen the electric light conduit and steam condense pipe carried in an inverted channel between the portals. Part of one of the unit air heaters—which for neatness and appearance are tucked in behind each portal—can be seen below the channel.

four-storey administrative block with laboratories.

The mechanical working hall will house a high-speed 14in 4-high cold-rolling mill and its motor generator set, together with wire-drawing and forging plant. It consists of a single-storey machine room, about 180ft long by 65ft wide with control gallery, toilets and generator machine room at one end and a low-level substation at the other. Special provision has been made to insulate the other shops and laboratories from vibrations emanating from this building. A 10-ton E.O.T. crane is provided. Daylighting is by extensive windows on three sides supplemented by a central lantern with servo-operated vents. The side windows consist of lower casements surmounted by stiffened-glass masonry panels nearly 20ft square.

The structure is of welded-steel portals at 20ft centres, with brick and glass block in-filling. The frames carry the roof on steel purlins. The side stiffening beams which connect the portals are encased in concrete, except at transom level, where the channel section carries the space-heating services. Roof cladding is of

channel-reinforced wood-wool slabs, felted on top, with plaster soffit.

There are capacious service subways either side of the hall with smaller, secondary ducts to machinery.

Finishes. External walls are in red sand-faced brick, English bond. On street elevations, the plinths, window surrounds, and curved pilasters are in artificial stone to simulate Springwell stone. Internally the walls are in fair face engineering bricks, which will be painted.

The melting shop is a lofty, single-storey shop to house a 10-cwt electric-arc furnace with ancillary equipment. An analytical laboratory and office are provided on the first floor of an annexe with a transformer, switchgear, toilet and compressor room at ground level.

The framework is of steel with welded portal frames, fabricated out of joist section, carrying purlins and sheeting rails. There are 9in brick in-filling panels to 8ft high, with main cladding in asbestos-cement sheeting. To give a fair face on both sides of the brick wall it has been built in stretcher bond tied with expanded metal. The metal window casements are

in artificial stone surrounds which bolt on to the structural frame, with rebated checks to weather the sheeting. The annexe is built in load-bearing brickwork with hollow, pre-cast concrete beams at 1st floor and roof.

External walls are in red sand-faced bricks, stretcher bond. Wall cladding will be painted russet colour. All workshop floors are granolithic. Floors in toilets are quarry tiled, laboratory and office floors have thermoplastic tiles.

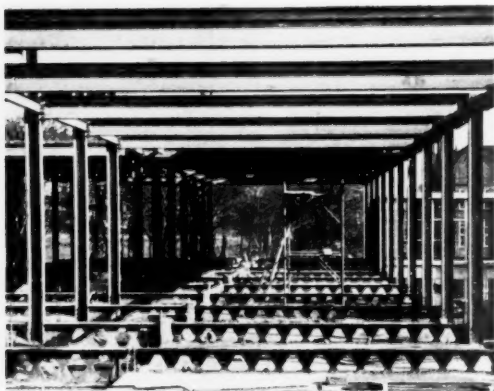
The administrative block will be a four-storey block containing chemical and physical laboratories, library, conference hall, canteen and offices.

Construction. The building will be steel framed with brick walls. Floors and roof are designed in purpose-made pre-cast R.C. beams arranged to provide a flexible system of underfloor ducts. All corridors will have acoustically treated ceilings and cork floor finishes. Offices and laboratories will have oak-block floors, plastered walls and suspended plaster ceilings.

The new Swinden laboratories designed by Messrs. J. Mansell Jenkinson and Son for the United Steel Companies Ltd., are



"C" Block of the new Swinden laboratories designed by Messrs. Mansell Jenkinson for the United Steel Companies, Ltd. See last paragraph above, et seq.



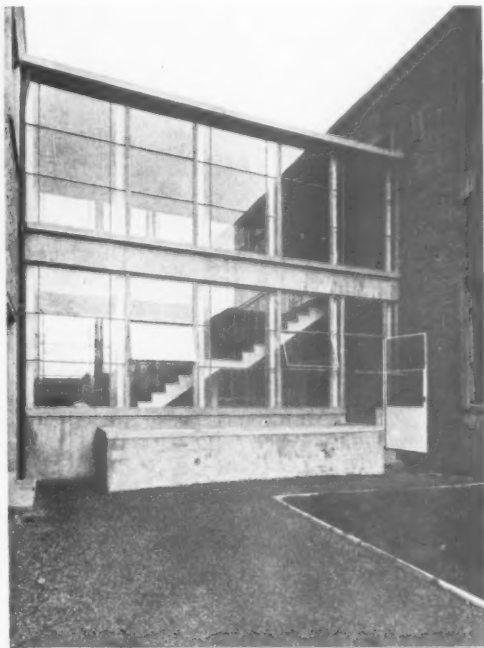
The Swinden Laboratories of the United Steel Companies at Rotherham, designed by J. Mansell Jenkinson & Son, F.R.I.B.A., consist of four separate blocks connected by passage or staircase units (see block plan on opposite page). The buildings are steel framed.

The picture, above left, is typical construction in block B. These blocks house metallurgy, physics, welding and chemistry laboratories.

A noteworthy and practical feature of the construction was the use of castellated beams by Appleby Frodingham. These beams have made for maximum flexibility since the holes (see picture top left) are utilized for the passage of pipes and of acid-resisting drains.

The interior view, above right, is in one of the two shops which flank a central corridor in block D. These shops house the aerodynamics section, the machine shop and heat treatment on the south-east side of the corridor and furnace design development and steel-making on the north-west side.

The monitor trusses permit excellent natural cross-lighting at two levels. The light is reflected downwards from the underside of the corrugated aluminium insulated roof decking (Bitumetal). These shops are 150ft long x 45ft wide. The low brick partitions are of sand-lime bricks with primrose coloured jointing.



Wings A and B are connected to the central entrance hall and administration block by stair halls. These connecting links are of specially designed light construction since the new laboratories are situated on the South Yorkshire coalfield and there is risk of differential settlement over the large area covered by the buildings.

The staircase halls are lit from both sides, as shown in the interior photograph above, left. Vertical expansion joints of mastic have been used at the four corner junctions of each stair hall with its attached wings.



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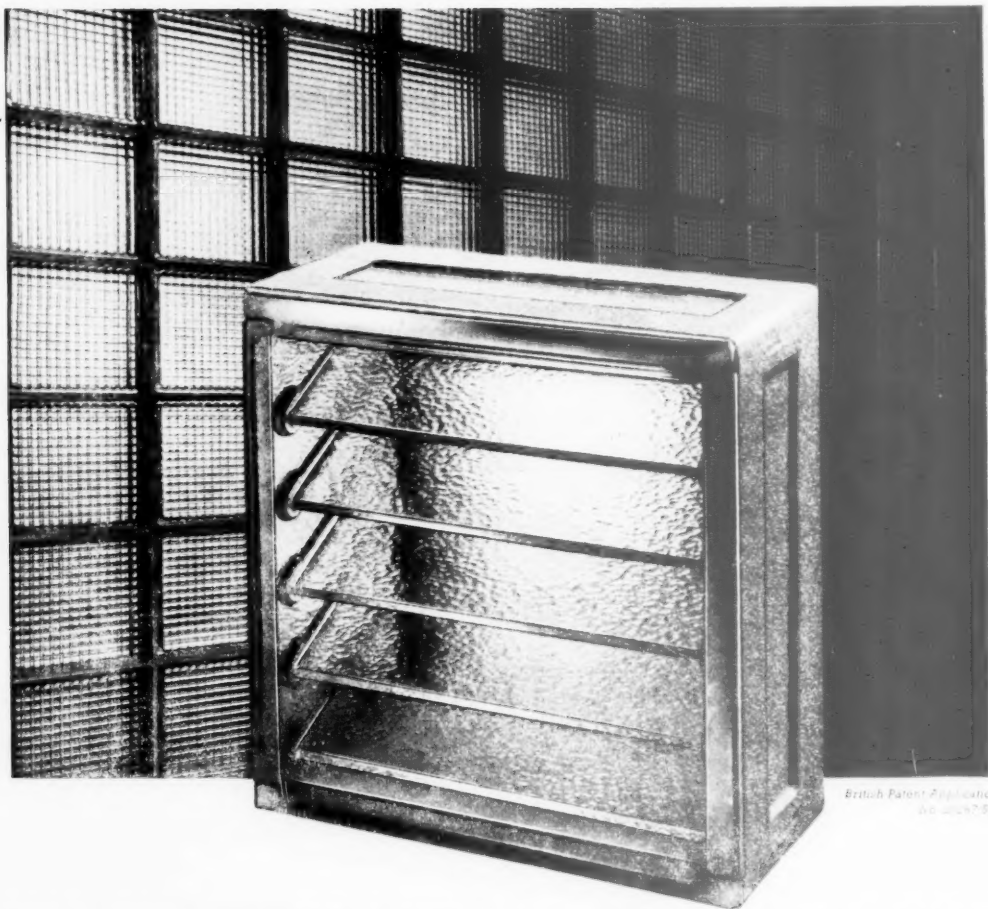
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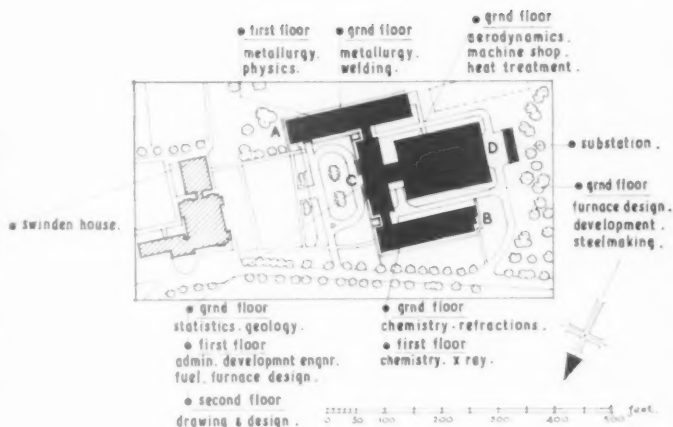
Right: Site plan of the new Swinden Laboratories of the United Steel Companies Ltd., at Rotherham.

situated on the South Yorkshire coalfield.

The three main blocks are of steel-framed construction, with reinforced-concrete floors and roofs. External walling is cavity construction throughout, the outer facings being in "Stamfordstone" bricks, of yellow-brown colour. So far as possible all internal walling is non load-bearing and may be altered with ease should this be required in the future.

A main service tunnel runs below all the ground-floor corridors and from this tunnel vertical ducts give services access to all rooms.

To accommodate the very large number of service pipes associated with the chemistry laboratories, the floor of the block concerned is of double construction, the intervening space being occupied by the various pipes.



## FACTORIES

Since the war several light factories have been built within the City Boundary of Sheffield. In many cases these replace slum dwellings and buildings too badly bomb-damaged for repair.

The cutlery factory of Messrs. Richards Bros. and Sons Ltd. for example, is close to the centre of the city and is one of the largest of those built post-war.

The architects are Messrs. Hadfield, Cawkwell & Davidson.

This building has been designed for erection in four stages. When completed the factory will extend to Young Street to occupy the whole island site which is bounded on the other three sides by Fitzwilliam Street, Bishop Street and Moore Street. The last-named is scheduled to become an important thoroughfare in the Sheffield Town Planning scheme and it is on to this street that the main frontage abuts.

The buildings are steel-framed and walls are of brick with facings of an even-fawn tone. Part of the main workshops are single-storey with top light. (See site plan and section).

From the main entrance in Moore Street the offices are approached by stair or lift. The works entrance is from Bishop Street. The majority of the workers are female. Off the time-clock lobby is a nurses' room and rest room.

At Dronfield just outside Sheffield a vast, new food factory for Messrs. William Gunstone & Sons Ltd. has been started. Here the policy is to move out of the City-centre activities and processes which are at present carried out there in separate buildings.

The first stage of this factory is the bread bakery, now completed except for later addition of more ovens, which is illustrated in later pages.

The buildings have been designed by Husband & Co., consulting engineers and architects.

The site is an agricultural belt on the eastern slopes of the Pennine foothills, 12 miles from Sheffield. It is close to the main Sheffield-Chesterfield road, and will eventually be flanked by a section of the projected main road from Leeds to Exeter.

This is shown in the aerial perspective.

The first stage is for the baking of bread only. After reviewing the most recent Continental and American practice, it was planned on two main levels. Raw materials enter at the front to storage, thence to a first-floor dough-room. The dough is returned to ground floor for baking,

cooling and despatch. An annexe to the production hall, house workshops, canteen, kitchen, toilets and offices. Administrative offices are on the front elevation to the road.

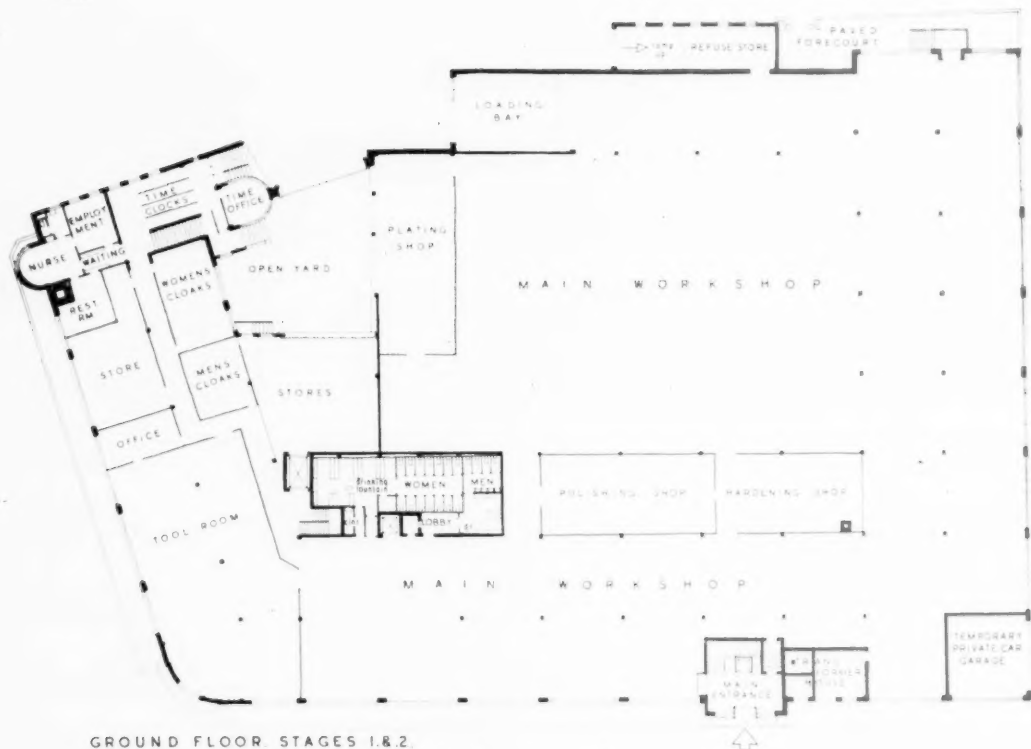
The structure is of load-bearing brick-work roofed with steel trusses carrying a reinforced-concrete cladding. As no steel



The cutlery factory for Messrs Richards designed by Hadfield, Cawkwell and Davidson was one of the first to be built in Sheffield post-war.

The site is close to the City centre and the new building replaces bomb-damaged and slum property. The picture shows the entrance in Moore Street which is scheduled to become an important thoroughfare in the development plan.

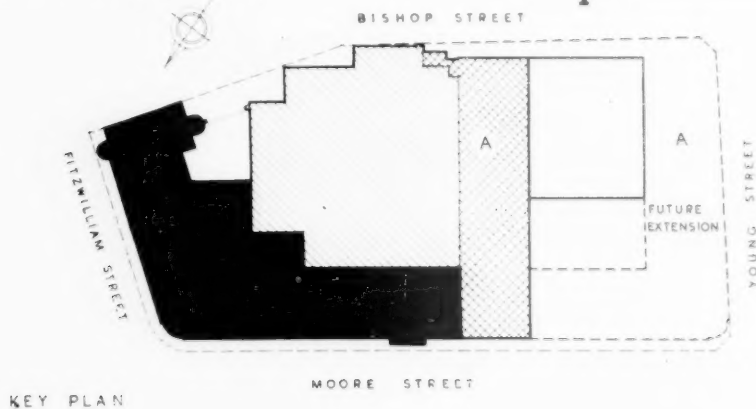
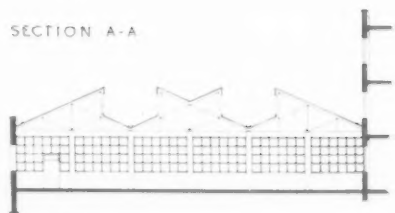
A general plan, block plan and part section appear on the next page.

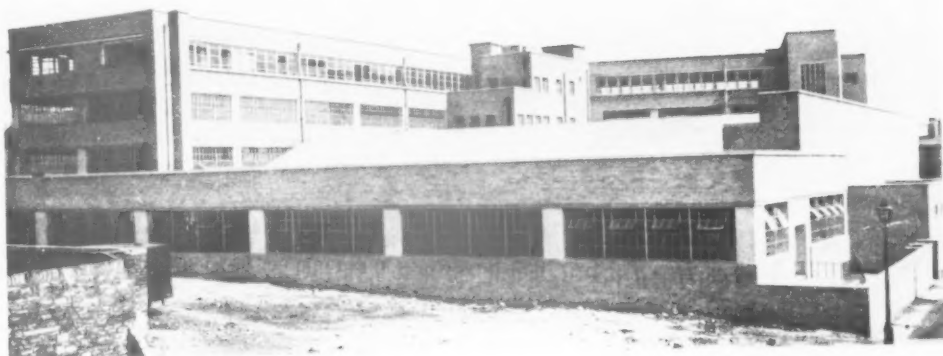


*Messrs. Richards' Cutlery Factory*  
*Architects: Hadfield, Cawkwell, and Davidson*

- STAGE 1 4 stories
- " 2 single storey
- " 2d. 2 more stories
- " 3. single storey

SECTION A-A

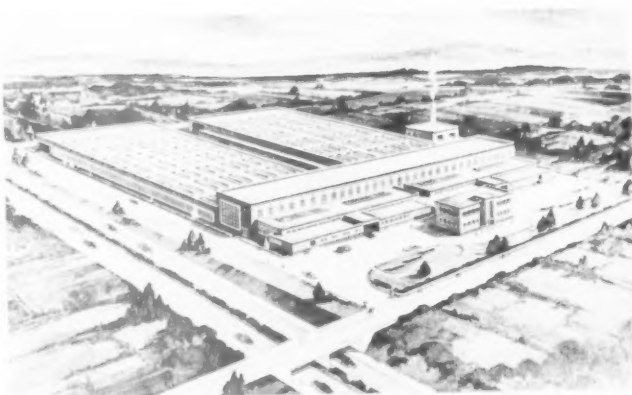


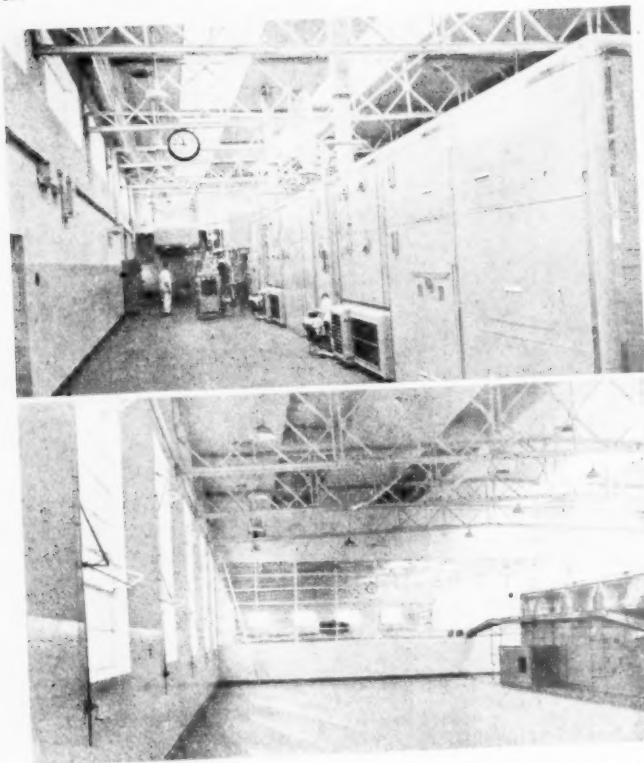


Above: a view of the back of Richards cutlery factory with the area for future extension in the left foreground. The high buildings face on to Moore Street and Fitzwilliam Street. The single storey areas house the main workshops.

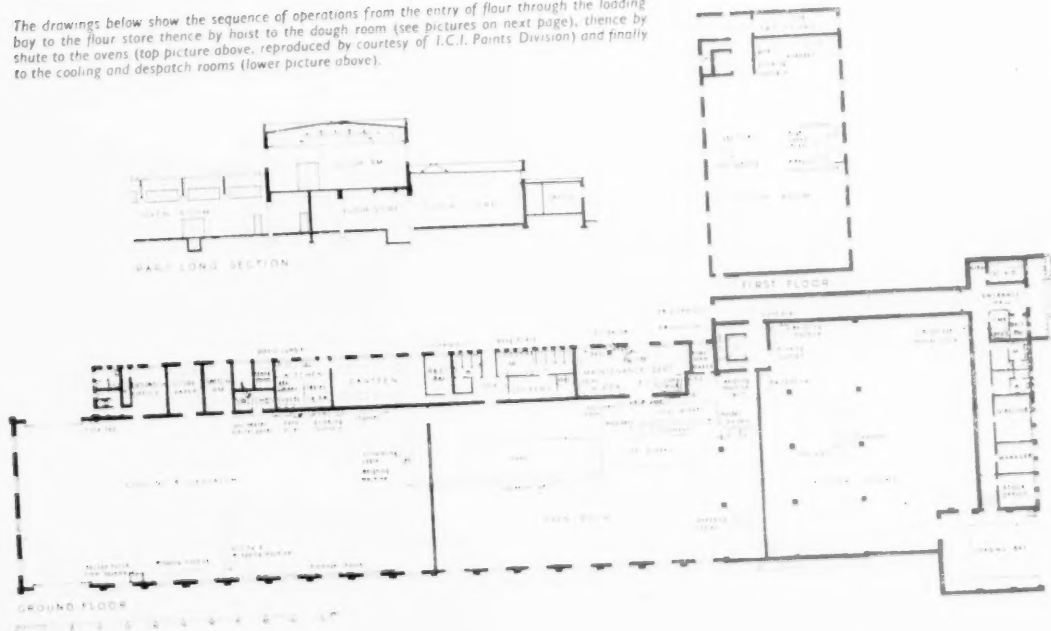
Right: a perspective impression of the completed food factory part of which has been completed for Messrs. Gunstone and Sons from designs by Husband & Company.

The present main entrance to the bread bakery is shown below. In the finished scheme this entrance can just be seen to the right of the freestanding office building in the right foreground of the perspective.





The drawings below show the sequence of operations from the entry of flour through the loading bay to the flour store thence by hoist to the dough room (see pictures on next page), thence by chute to the ovens (top picture above, reproduced by courtesy of I.C.I. Paints Division) and finally to the cooling and despatch rooms (lower picture above).



allowance was made, the trusses were fabricated from Government W.D. surplus Bailey Bridge panels with purpose-made shoes, pins and links. The dough-room is of brick supported on a reinforced-concrete platform, poised over the main production floor. The boiler-house and annexe have roof coverings of asbestos-cement cavity decking.

The front elevation to the road is faced with "Asgold" golden-red rustic bricks. Window surrounds are in artificial stone of light fawn colour. The main entrance canopy is faced with pre-cast terrazzo panelling in cream flecked with red, with dark green skirting. The doors are framed of polished Yugoslavian oak in a dark green terrazzo surround. All other doors are painted deep blue, metal casements ivory.

The clients placed the highest value on the ease of cleaning. For this reason most of the building has tiled floors with tiled dados, all angles being coved or arched. All walls are in washable paint. The oven room has a floor of red-clay floor tiles with Astley cream-glazed wall tiles to dado, the wall over is in plaster, painted pale primrose. The cooling room has a granolithic floor, cream-tiled walls to dado and primrose-painted fairface brickwork over. The roof soffits are panelled with cork slabs, painted, as are the Bailey trusses, in pale mist blue. Annexe offices and canteen have red magnesium-oxchloride floors with primrose plastered walls. Asbestos soffits are painted ivory. Lavatories have tiled floors and walls with cream terrazzo partitions. Corridor floors are cream terrazzo with dark green borders. Floors to the front offices are European oak blocks, laid basket pattern. The air-conditioned dough-room has a floor of cast-iron tiles to withstand the heavy wear of the dough pans. The walls have a cream tiled-dado and primrose plaster over with double glazing in two frames set 4in. apart. Into the wall tiling is let a rubber cushion to absorb the impact





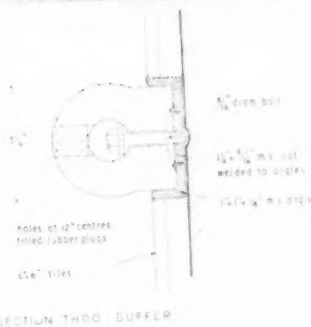
Above: a general view in the dough-mixing room of the Draxfield Bakery. Flour is delivered from the hoist in the right of the picture to a mechanical mixer which empties the dough into the cooling vats. The vats are on wheels. When the dough is cool the vats are run across the floor—which is of cast iron cellular pattern in which the cells are filled with the floor screed—to the chute shown in the picture right, above. To prevent damage to the tiled walls if the heavy vats bump into them a continuous rubber bumper rail has been let into the tiling all round the room. See detail at right. The ceiling of this room is of glossy painted light panels carried on aluminium T strips. Flour dust filters are fitted in the flush ceiling ventilators. Reproduced by courtesy of I.C.I. Paints Division.

of dough pans. The suspended ceiling of mould-resistant Kimol board, trimmed with matt aluminium tee-bar, is finished pale blue. The largely automatic machinery is uniformly painted in Berwick Blue with stainless-steel fittings and chromium-plated trim.

On the edge of the site, an independent boiler-house has been built, designed for future extension. It contains one "Ultra-nomic" boiler producing 4,000lb of steam per hour at 80 p.s.i. A grit arrester to clean the flue gases and a low-ram coking stoker are fitted. Through an underground subway low-pressure steam is supplied to the proven and gas-fired oven, for space

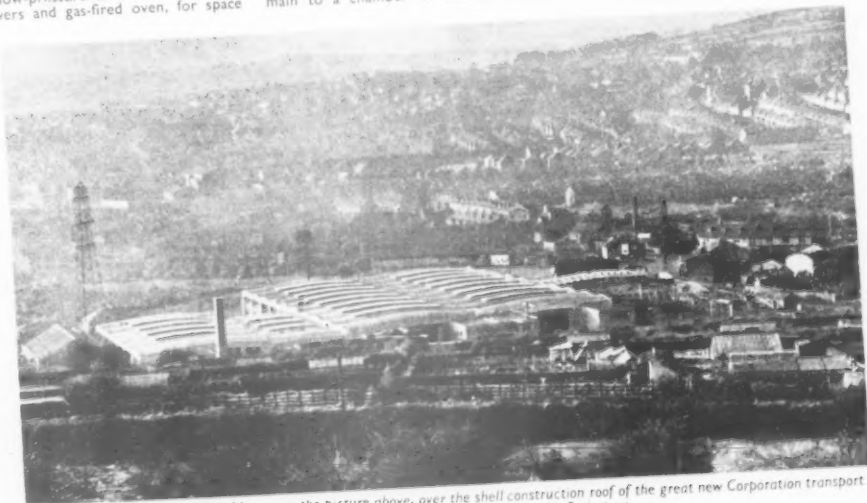
heating by low-speed unit heaters, supply to air-conditioning plant, and H.W. supply by calorifiers. Machinery is all-electric. The H.T. supply is to an outdoor transformer, and thence to a sub-station containing pressed-steel switchgear panels with chromium-plated steel and plastic fittings. Distribution of three-phase L.T. supply is by V.I.R. cable in pressed-steel filleted trunking. Light, heat and power are separately metered. Clocks, relays and internal telephones are also wired via the trunking. All services have been colour-coded by banding.

High-pressure gas is delivered by a 6in. main to a chamber in the boiler-house,



SECTION THRU BUMPER

and supplied at low pressure to the oven burners. The bakery has main drainage, with mops of the surface water discharged down an old pit shaft.



And so we say farewell to Sheffield, seen in the picture above, over the shell construction roof of the great new Corporation transport garage which is now nearing completion of the first stage.

Continued from page 401]

became available. The result over a large area tends to create irregular patches of brick textures. A very recent development on this estate is a good looking detached house which is illustrated on another page of this review.

The effect of choosing pleasing bricks—where freedom of choice exists—is illustrated by the Church and Community Hall built on this same housing estate and designed by a firm of private architects.

Much of Rotherham's post-war progress in traditionally built housing is due to the early support given to the training of apprentices.

When the scheme—promoted by the M.W. and the National Joint Council for the Building Industry—was notified to Local Authorities in

1944 there were 20 boys completing their course at Rotherham Technical College. A local firm of contractors apprenticed these boys and with the aid of a limited number of craftsmen built 6 houses. The first two of these houses, occupied in 1945, are believed to be the first traditionally built houses completed by a local authority in the post-war period.

Since then, progress has been made not only in quantity but in quality of design of the houses. Side by side with housing development school building is progressing and apart from numerous completed schools there is now under construction just outside Rotherham one of the largest schools in the country. Close by are the new laboratory buildings of the United Steel Companies. This is

one of several developments connected with progress and research in heavy industry. In Sheffield itself the British Iron and Steel Research Laboratory is in course of construction and a new rolling mill and office extensions for Firth Vickers, Ltd., are nearly completed. A bus garage for the Corporation with shell roof construction is being built on the outskirts of the City and several light factories have been recently completed. Such are the buildings which constitute Sheffield's and Rotherham's contribution to post-war building. In the foregoing pages a selection of these buildings is illustrated.

Lack of space has prevented more examples being illustrated and pending publication of the development plan no reference to general town planning has been possible.

## CONTRACTORS, SUB-CONTRACTORS & SUPPLIERS

The following names of contractors, sub-contractors and suppliers for works illustrated or mentioned in the foregoing review of buildings in the Sheffield and Rotherham areas have been supplied by the architects concerned.

### GENERAL CONTRACTORS

HARTINGTON MEMORIAL HOUSING AT WHARFCLIFFE SIDE	W. A. Sheldon.	CHURCH HALL AT BROOM VALLEY	J. F. Finnegan & Co. Ltd.
	W. H. Nelson.	CATHEDRAL CHAPEL, SHEFFIELD	George Longden & Son Ltd.
	W. C. Insley.	B.I.S.R.A. LABORATORIES	George Longden & Son Ltd.
HOUSING AT WORRALL	W. H. Nelson.	SWINDEN LABORATORIES	George Longden & Son Ltd.
HOUSING AT LANE END	J. F. Finnegan & Co.	RICHARDS CUTLERY FACTORY	George Longden & Son Ltd.
HOUSING AT PILLEY	W. C. Insley.	BAKERY AT DRONFIELD	R. S. Hutchinson Ltd.
BROOM VALLEY PRIMARY SCHOOL	M. J. Gleeson (contractors) Ltd.		

### SUB-CONTRACTORS & SUPPLIERS

**BROOM VALLEY PRIMARY SCHOOL, ROTHERHAM.** Acoustic Tiles—J. H. Brown & Co. Ltd., Leeds. Balustrading—J. R. Pearson Ltd., Birmingham. Cement Glaze—Modern Surfaces Ltd., London. Chalkboards—Wilson & Gorden Ltd., Kilsyth. Cissroom Fittings—Frid Verry & Son, Leeds. Composition Flooring—The Granwood Flooring Co. Ltd., Riddings. Counter Fittings—John Curtis & Son, Leeds. Curtain Track—Thos. French & Son Ltd., Manchester. Electric Cables—The Synchronome Co. Ltd., Wembley. Electric Fittings—Falk Stadelmann & Co. Ltd., London. Electrical Installation—Yorkshire Electricity Board, Rotherham. Fencing—Boylis, Jones & Boylis Ltd., Wolverhampton. Fireplaces—W. H. Muckelthwait & Co. Ltd., Rotherham. Fire Fighting Equipment—Pine's Fire Prevention Service, Tewkesham. Floor Covering (Linoleum)—Britann Bros. (Rotherham) Ltd. Gas Installation—East Midlands Gas Board, Sheffield and Rotherham Division. Glass and Concrete Roof Lights—J. A. King & Co. Ltd., London. Heating—The Norris Warming Co. Ltd., London. Heating (underfloor)—The Granwood Flooring Co. Ltd., Riddings. Ironmongery—James Gibbons Ltd., Wolverhampton. Kitchen Canopy—E. Rushworth & Son Ltd., Leeds. Library Shelving—Geo. M. Hemmer & Co. Ltd., Haringey. Nameplates—Sign Arts Ltd., West Bromwich. Projection Portholes—G. B. Kaine Ltd., London. Radio—Rotherham Radio Service. Reconstructed Stonework—H. J. Baldwin & Co. Ltd., Nottingham. Roller shutters—Roller Shutters Ltd., Birmingham. Roof Coverings—John Hadfield & Sons Ltd., Sheffield. Sanitary Fittings—J. B. Dent & Co. Ltd., Rotherham. Sliding and Folding Partitions—Educational Supply Association, Stevenage. Stage and Production Fittings—Watts & Corry Ltd., Manchester. Steelwork, Pressweld Beams, Precast Concrete Slabs—Hells (Bramwell) Ltd. Suspended ceilings—Expanded Metal Co. Ltd., London. Terrazzo—Hodkin & Jones Ltd., Sheffield. Tiling—Carter & Co. (London) Ltd. Windows and Doors (Metal)—Mellows & Co. Ltd., Sheffield.

**B. I. S. R. A. LABORATORIES.** Architectural Metalwork—W. Garratt & Son, Sheffield. Asbestos Sheet—W. Pricer & Sons Ltd., Sheffield. Asphalt—Val de Travers Ltd., Bricks—Woodside Brick Co. Ltd., Sheffield. Cement (Portland)—Keston Cement Co. Ltd., Sheffield. Cements (Aluminous)—Lofarge Aluminous Cement Co. Ltd., Concrete Aggregate—Bessacore Gravel Co. Ltd., Doncaster. Cork Flooring—Cork Insulation & Asbestos Co. Ltd., London. Drainage Materials—Naylor Bros. Ltd., Donby Dale. Electricity Supply and Installation—Yorkshire Electricity Board. Excavation and Demolition—J. Childs, Sheffield. Extractors—Cilt Ventilation Co. Ltd., Surbiton. Floor Joists and Slabs—Hull Concrete Stone Co. Ltd. Floor Tiles—Wm. Monks & Son Ltd. Gas Supply—East Midlands Gas Board. Glass Blocks and Glazing—Pilkington Bros. Glass, Figured—Chance Bros. Ltd., London. Granolithic Duct Covers—Craft Granite Brick & Concrete Co. Ltd., Leicester. Heating—Brightside Foundry and Engineering Co. Ltd. Hollow Floors—Siegwart Ltd. Hyrb Lathing—Trusted Concrete Steel Co. Ltd., London. Ironmongery, Balustrades—Neville Watts Ltd., Liffes. Kneighly Lifts Ltd., Paintwork—W. Hamilton & Sons Ltd., Sheffield. Plumbing (General)—Brathwaite & Co. Ltd., Leeds. Plumbing (Special)—Newman & Watson Ltd., (Sheffield). Reconstructed Stone—Hull Concrete Stone Co. Ltd. Reinforcement—United Strip and Bar Co. Ltd., Sheffield. High Tensile Reinforcement—McCall & Co. Ltd. Roofing Slabs—Thermacast Ltd. Sanitary Ware—Adamson Ltd., Arnold Carter & Co. Ltd., Sheffield. Steelwork—Dorman Line & Co. Ltd. Steel Shutter Gates—Bolton Gate Co. Ltd. Terrazzo—Hodkin & Jones Ltd., Sheffield. Tile Floors (Semiastic)—Semtee Ltd. Water Supply—Sheffield Corporation. Windows, Lantern Lights and Patent Glazing—Mellows & Co. Ltd., Sheffield. Woodblock Floors—Hollis Bros., Ltd., Hull.

**SWINDEN LABORATORIES.** Asphalting—John Hadfield & Sons Ltd., Sheffield. Electrical installation—Keep and Ruebuck Ltd., Sheffield. Laboratory Furniture—Thos. Wilkinson & Sons Ltd., Sheffield. Heating and Ventilation—W. Richardson & Co. Ltd., Sheffield. Floor Tiles, Hollow Blocks, etc.—William Munn Ltd., Ironmongery, Doors and Floor Springs—Neville Watts Ltd., Sheffield. Plastering—Reinolds & Williams Ltd., Chester. Plastering—George Simpson & Co. Ltd., Sheffield. Reinforcement—McCall & Co. Ltd., Sheffield. Roof Decking—William Prince & Sons Ltd., Dundee. Steelwork—The United Steel Structural Co., Ltd., Sunthorpe. Temperature Control—Hoyes Heating Ltd. Windows—Mellows & Co. Ltd., Sheffield.

**RICHARDS CUTLERY FACTORY.** Acid resisting Floors—Prodrate Ltd., Wednesbury. Brick Facings—Williamson, Cliff Ltd., Stamford. Concrete Glazing—Haywards Ltd., London. Drain Pipes—William Monks Ltd. Electrical Work—Deans Electrical and Engineering Co. Ltd., Rotherham. Fire Precautions—Atlas Sprinkler & Co. Ltd., Swansea. Glasscrete Rooflights—J. A. King & Co. Ltd., London. Heating and Hot Water—Brightside Ironfoundry and Engineering Co. Ltd., Sheffield. Lifts—Echells Longden and Mun Ltd., Middlesbrough. Lifts (Metal)—Williams & Williams Ltd., Chester. Partitions (Coffers)—Bones Ltd., London. Plastering—Hodkin & Jones Ltd., Leeds. Plumbing—George Simpson & Co. Ltd., Sheffield. Reinforcement—McCall & Co. Ltd., Sheffield. Roofing—Thermacast Ltd., London. Roof Lights—Mellows & Company, Sheffield. Steelwork—Redpath Brown & Co. Ltd., Glasgow. Terrazzo and Tiling—Carter & Co. (London) Ltd. Waterproofing and Flooring—J. Hadfield & Sons Ltd., Sheffield.

**BAKERY AT DRONFIELD.** Air Towels—Quiz Electrics Ltd. Air Treatment—Air Treatment Engineering Co. Ltd., Leeds. Anderson Suspended Ceiling—Radders & Payne Ltd., Birmingham. Asbestos Cavity Decking—Turner and Newall Ltd., Manchester. Asphalt Roofing and Tanking—Anglo-American Asphalt Co. Ltd. Baking Machinery—Baker Perkins Ltd., Peterborough. Boiler—Dovey Foxman Ltd., Colchester. Clocks—International Time Recording Co. Ltd. Door Furniture—Alfred Shaw Ltd. Electrical Installation—C. R. Waterhouse Ltd., Sheffield. Electric Cables—British Insulated Cables Cable Co. Ltd. Electric Supply—Yorkshire Electricity Board. Gas Fitting—East Midlands Gas Board. Grit Arrestor—Bennett Engineering Co. Ltd. Heating Installation—The Steam & Mining Equipment Co. Ltd., Sheffield and Leeds. Heaters—Crane Ltd. Insulation—Simpkin Machine Ltd. Joinery—R. S. Hutchinson Ltd., Sheffield. Lifts—Waygood-Orts Ltd. Lightning Conductor—W. E. Harrison (Sheepclog) Sheffield. Mechanical Stoker—James Hodgson Ltd., Salford. Painting—R. S. Hutchinson Ltd. Paints—C. I. Ltd., Slough. Plumbing—Newman and Watson Ltd., Portland Cement—Foster Cement Co. Ltd. Precast Concrete—William Priestrich Ltd., Dronfield. Pumps—J. & W. Weir Ltd., Glasgow. Refrigeration—Johns Hinde Ltd., Leeds. Sanitary Ware—Adams Ltd. Signs, Cast Bronze—Neville Watts Ltd. Steel erection—Charles Ross Ltd., Sheffield. Steel Furniture—Frank Bold Ltd. Steel Shutter Gates—Bolton Gate Company Ltd. Steel Skins—W. G. Sissons Ltd. Switchgear and Trunking—The Power Centre Co. Ltd. Telephones (Internal)—Automatic Telephone & Electric Co. Ltd. Terrazzo—Hodkin & Jones Ltd. Tiles (Pilkington)—Wm. Monks & Son Ltd., Sheffield. Tiles (Wall and Floor)—Righys, Tiers, Ltd., Sheffield. Vectars—British Trane Co. Ltd. Welding—W. Garratt & Son, Sheffield. Window Frames and Lantern Lights—Mellows & Co. Ltd., Sheffield. Woodblock Flooring—Hollis Bros. Ltd., Hull.

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Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

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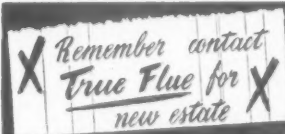
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# CONTRACT NEWS

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### BUILDING

**ANDOVER B.C.** (a) 24 houses and ancillary works, Mead Hedges site. (b) Borough Surveyor, "Beech Hurst," Weyhill Road. (c) 2gns. (e) April 21.

**BEDFORDSHIRE C.C.** (a) 6 houses, Oakley Road, Luton. (b) County Architect, Shire Hall, Bedford. (e) April 8.

**BERKSHIRE C.C.** (a) Ambulance station, "The Wilderness," East Street, Maidenhead. (b) County Architect, Wilton House, Parkside Road, Reading. (c) 2gns. (e) April 18.

**BEXLEY B.C.** (a) Adaptations and improvements to Wrotham Road Clinic, Wellington. (b) Borough Engineer, West Lodge, Broadway, Bexleyheath. (c) 2gns. crossed cheque, payable to Corporation. (e) April 18.

**BILLINGE AND WINSTANLEY U.C.** (a) 28 houses, Claremont. (b) Council's Clerk, Council Offices, Main Street, Billinge, Nr. Wigan. (c) 2gns. (e) April 30.

**BOOTLE B.C.** (a) (Scheme 22 (N)) 22 dwellings; (Scheme 22 (O)) 14 dwellings; (Scheme 22 (P)) 8 dwellings, Sterrix Lane. (b) Borough Surveyor, Town Hall. (c) 2gns each scheme. (e) April 22.

**BRACKLEY R.C.** (a) 7 houses, Culworth. (b) Mr. J. H. Stevens, 2a, Banbury Road. (c) 2gns.

**BRIDGWATER B.C.** (a) 24 flats, Sydenham Estate. (b) Borough Engineer, Town Hall. (c) 2gns. (e) April 26.

**CHELMSFORD B.C.** (a) Contract No. 1) 16 bungalows at Spalding Avenue and 6 at Melbourne Avenue, (Contract No. 2) 10 bungalows at Rainsford Lane Estate and 14 on the Melbourne Estate. (b) Borough Engineer, Municipal Offices, Duke Street (after April 4th). (c) 2gns each contract. (e) April 22.

**CHESTER R.C.** (a) 22 houses, Capenhurst. (b) Mr. T. C. R. Eaton, 16, White Friars. (c) 3gns payable to Council. (e) April 23.

**CHRISTCHURCH B.C.** (a) 10 shops and 6 flats with garages and stores, Somerford No. 2 Estate. (b) Mr. A. E. O. Geens, 15, Westover Road, Bournemouth. (c) 2gns payable to Council. (e) April 18.

**CLEETHORPES B.C.** (a) (1) 4 blocks of 4 flats and (2) 1 block of 4 houses, Beacon Hill site No. 6. (b) Borough Engineer, Council House. (c) 2gns. (e) April 16.

**EIRE—BUNCRANA U.C.** (a) 8 houses at New Road and Castle Avenue. (b) Town Clerk, Town Clerk's Office, Upper Main Street. (c) £10. (e) April 21.

**EIRE—DUBLIN CORPORATION.** (a) 9 blocks of flats and 1 block of shops at Section No. 2, North Circular Road housing area. (b) City Treasurer, Exchange Buildings, Lord Edward Street. (c) 5gns. (e) April 22.

address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

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**FIRE—GALWAY C.C.** (a) Clinic at Shantalla. (b) Patrick J. Sheahan, 47, O'Connell Street, Limerick. (c) 10gns. (e) April 23.

**FRINTON AND WALTON U.C.** (a) 5 blocks of 4 houses, Bemerton Estate, Kirby Cross. (b) V. G. Scammell, 123, High Street, Walton-on-the-Naze. (c) 2gns payable to Council. (d) April 12.

**HALTWHISTLE R.C.** (a) 12 aged persons' dwellings, Aescia Road site. (b) Engineer and Surveyor, Council Offices. (c) April 23.

**HYTE B.C.** (a) 4 pairs of houses, Horn Street. (b) Town Clerk, Municipal Offices, Stade Street. (c) 2gns. (d) April 7.

**LEEDS C.C.** (a) (Contract No. 493) 18 houses, Farrar Lane, Ireland Wood Estate, (Contract No. 494) 38 houses, Tinshill Avenue, Tinshill Estate, (Contract No. 495) 28 flats, Kentmere Approach, Seacroft Estate, (Contract No. 496) 16 flats and 18 houses, Scott Hall Road, Moorfield Estate, (Contract No. 497) 24 flats and 6 houses, Scott Hall Road, Moorfield Estate, (Contract No. 498) 20 flats and 8 houses, Harley Drive, Swinnow Estate, (Contract No. 499) 20 flats at Leeds and Bradford Road, Moorside Estate (Contract No. 500) 16 flats, Wellington Grove, Moorside Estate, and (Contract No. 501) 28 flats, Gannars Road, Moorside Estate. (b) City Architect, Priestley House, Quarry Hill (indicating contract or contracts). (c) 1gn each contract. (e) April 28.

**LINCOLN C.C. (PARTS OF KESTIVEN).** (a) Infants' school, Belton Lane, Grantham. (b) County Architect, County Offices, Sleaford. (d) April 7. (e) May 1.

**LIVERPOOL REGIONAL HOSPITAL BOARD.** (a) Alterations to form operating theatre suite, Ellesmere Port Hospital. (b) Regional Architect, 88, Church Street. (c) 2gns. (e) April 16.

**LLANELLY B.C.** (a) 14 houses, Cefncaeau North site. (b) Borough Architect, 5, Goring Road. (c) 2gns. (e) April 12.

**LONDON — BRENTFORD AND CHISWICK B.C.** (a) 8 shops and 14 maisonettes, High Street, Brentford. (b) Borough Engineer, Town Hall, W.4. (c) 5gns. (e) April 28.

**LONDON—GREENWICH B.C.** (a) 4-storey block of 12 flats, Elliscombe Road, Charlton. (b) Borough Engineer, Town Hall, Greenwich High Road, S.E.10. (d) April 7, with details of recent works carried out.

**LYNTON U.C.** (a) (1) 20 houses and (2) site works at the "Grattons" site. (b) Council's Clerk, Town Hall. (d) April 18, with assurances of financial and material resources.

**N. IRELAND—BELFAST C.C.** (a) Additions and alterations to Further Education Centre, Stanhope Street. (b) Education Architect's Department, Academy Street. (c) £2. (e) April 24.

**NEWCASTLE-UNDER-LYME B.C.** (a) 2-storey addition to Estates Office, Upper Green. (b) Borough Engineer, Lancaster Building, High Street. (c) 2gns. (e) April 17.

**NORTHALLERTON R.C.** (a) 32 houses, Brompton. (b) Council's Clerk, Council Office. (c) 2gns. (e) April 16.

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**N. IRELAND—ENNISKILLEN B.C.** (a) 12 houses, Derrychara Drive. (b) Town Clerk, Town Hall. (e) April 17.

**ONGAR R.C.** (a) (Group I) 22 houses, (Group II) 12 houses and (Group III) 8 houses, Shelley Estate. (b) Engineer and Surveyor, Bowes Field, High Street, Chipping Ongar. (c) 2gns.

**SADDLEWORTH U.C.** (a) 14 houses, Spring Wood Estate, Delph. (b) Messrs. Howard and Benson, 88, Mosley Street, Manchester, 2 (after April 7th). (c) 2gns. (e) April 28.

**SCOTLAND—EAST LOTHIAN HOSPITALS GROUP BOARD OF MANAGEMENT.** (a) Operating theatre and ancillary ward accommodation at Roodlands General Hospital, Haddington (separate trades). (b) Messrs. R. and A. K. Smith, 4, Forbes Street, Edinburgh 3. (c) April 26.

**SCOTLAND—EDINBURGH C.C.** (a) Reconstruction at 82/84, Canongate to form 3 houses and 1 shop (separate trades). (b) City Architect, City Chambers. (c) April 18.

**SCOTLAND—WEST LOTHIAN C.C.** (a) 32 houses at Dalmeny, 16 at Livingston Village and 42 at Uphall (separate trades). (b) County Clerk, County Buildings, Linlithgow. (d) April 11.

**SITTINGBOURNE AND MILTON U.C.** (a) 84 dwellings, Homewood Estate. (b) Engineer and Surveyor, High Street, Sittingbourne. (c) 3gns. (e) April 24.

**SOUTHEND-ON-SEA B.C.** (a) Public convenience, Fairfax Drive. (b) Borough Architect, Municipal Buildings. (c) £2. (e) April 16.

**STROOD R.C.** (a) 12 houses, Tanyard Hill, Shorne. (b) Engineer and Surveyor, Council Offices, Frindsbury Hill. (c) 5gns. (e) April 16.

**STROUD U.C.** (a) 30 houses, Cashes Green. (b) Engineer and Surveyor, Council Chambers, High Street. (c) April 30.

**SWANSEA B.C.** (a) 56 flats, Heol Gwyrssydd, Penlan. (b) Borough Architect, The Guildhall. (c) £5. (d) April 7.

**WEST RIDING C.C.** (a) Conversion of basement at Albert Road, Shipley, J.M. School, into dwelling accommodation. (b) Divisional Education Officer, Education Office, Town Hall, Shipley. (c) April 16.

**WOKINGHAM B.C.** (a) 14 aged persons' dwellings, including communal room and caretaker's flat, Cockpit Path. (b) Eric G. V. Hives, 3, Cork Street, Reading. (c) 2gns. (e) April 18.

### PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

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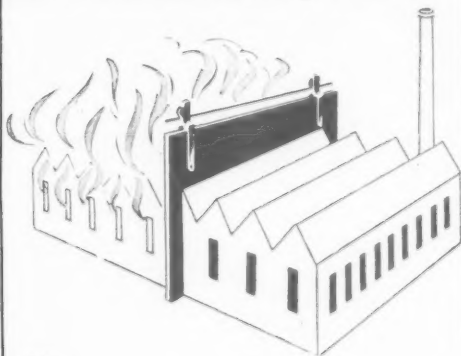
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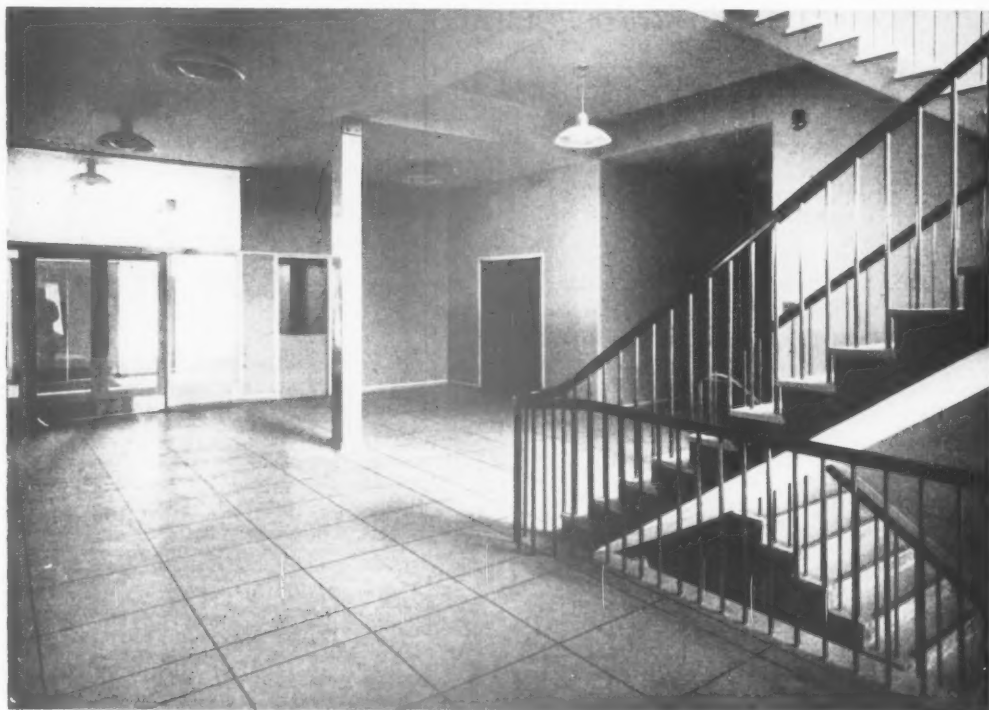
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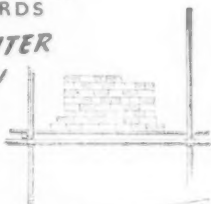
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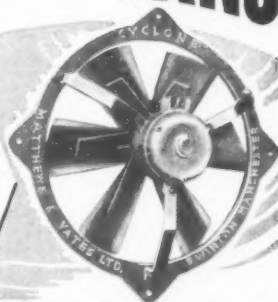


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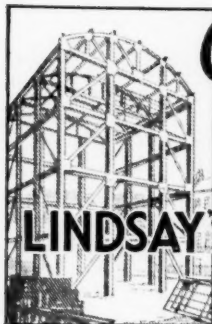
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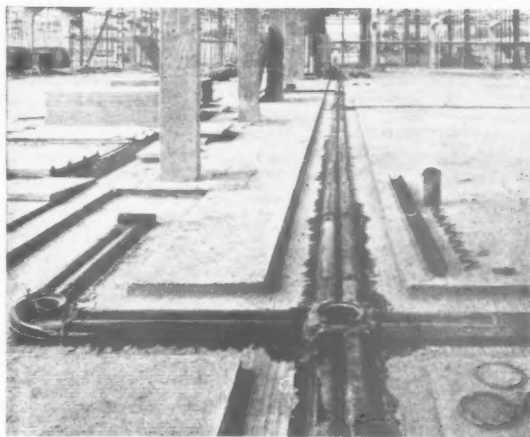
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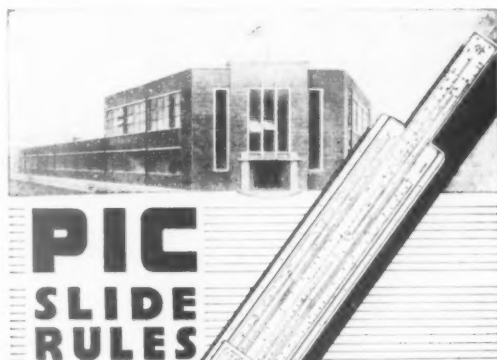
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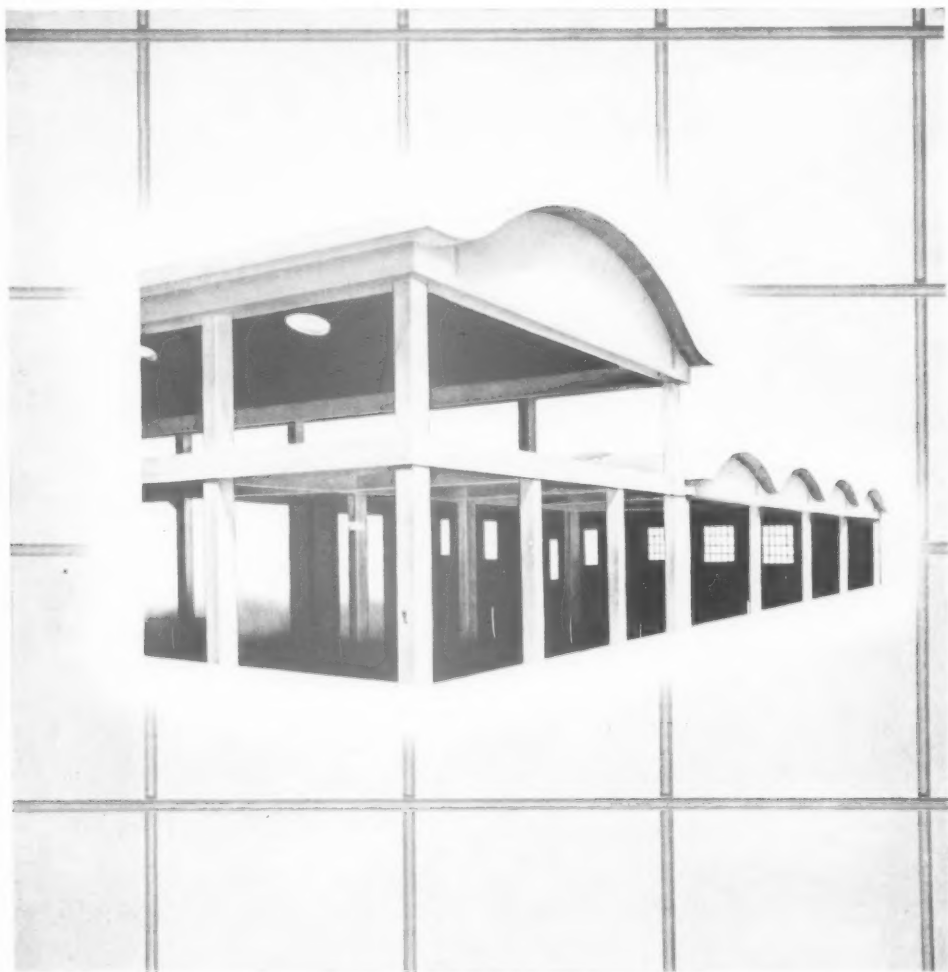
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